

Revive Volume 1, 2003

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The Parrot's Training

ONCE UPON A TIME THERE WAS a bird. It was ignorant. It sang all right, but never recited scriptures. It hopped pretty frequently, but lacked manners. Said the Raja to himself: 'Ignorance is costly in the long run. For fools consume as much food as their betters, and yet give nothing in return.' He called his nephews to his presence and told them that the bird must have a sound schooling.

The pundits were summoned, and at once went to the root of the matter. They decided that the ignorance of birds was due to their natural habit of living in poor nests. Therefore, according to the pundits, the first thing necessary for this bird's education was a suitable cage. The pundits had their rewards and went home happy.

A golden cage was built with gorgeous decorations. Crowds came to see it from all parts of the world. 'Culture, captured and caged!' exclaimed some, in a rapture of ecstasy, and burst into tears. Others remarked: 'Even if culture be missed, the cage will remain, to the end, a substantial fact. How fortunate for the bird!' The goldsmith filled his bag with money and lost no tune in sailing homewards.

The pundit sat down to educate the bird. With proper deliberation he took his pinch of snug: as he said: 'Textbooks can never be too many for our purpose!' The nephews brought together an enormous crowd of scribes. They copied from books, and copied from copies, till the manuscripts were piled up to an unreachable height. Men murmured in amazement. 'Oh, the tower of culture, egregiously high! The end of it lost in the clouds!' The scribes, with light hearts, hurried home, their pockets heavily laden.

The nephews were furiously busy keeping the cage in proper trim. As their constant scrubbing and polishing went on, the people said with satisfaction: 'This is progress indeed!'

Men were employed in large numbers and supervisors were still more numerous. These, with their cousins of all different degrees of distance, built a palace for themselves and lived there happily ever after. Whatever may be its other deficiencies, the world is never in want of fault-finders; and they went about saying that every creature remotely connected with the cage flourished beyond words, excepting only the bird.

When this remark reached the Raja's ears, he summoned his nephews before him and said: 'My dear nephews, what is this that we hear?' The nephews said in answer: 'Sire, let the testimony of the goldsmiths and the pundits, the scribes and the supervisors be taken, if the truth is to be known. Food is scarce with the fault-finders, and that is why their tongues have gained in sharpness.' The explanation was so luminously satisfactory that the Raja decorated each one of his nephews with his own rare jewels.

The Raja at length, being desirous of seeing with his own eyes how his Education Department busied itself with the little bird, made his appearance one day at the great Hall of Learning.

From the gate rose the sounds of conch-shells and gongs, horns, bugles and trumpets, cymbals, drums and kettledrums, tomtoms, tambourines, flutes, fifes, barrel organs and bagpipes. The pundits began chanting mantras with their topmost voices, while the goldsmiths, scribes, supervisors, and their numberless cousins of all different degrees of distance, loudly raised a round of cheers. The nephews smiled and said: 'Sire, what do you think of it all?' The Raja said: 'It does seem so fearfully like a sound principle of Education!' Mightily pleased, the Raja was about to remount his elephant, when the faultfinder, from behind some bush, cried out: 'Maharaja, have you seen the bird?' 'Indeed, I have not!' exclaimed the Raja. 'I completely forgot about the bird.'

Turning back, he asked the pundits about the method they followed in instructing the bird. It was shown to him. He was immensely impressed. The method was so stupendous that the bird looked

ridiculously unimportant in comparison. The Raja was satisfied that there was no flaw in the arrangements. As for any complaint from the bird itself, that simply could not be expected. Its throat was so completely choked with the leaves from the books that it could neither whistle nor whisper. It sent a thrill through one's body to watch the process.

This time, while remounting his elephant, the Raja ordered his State ear-puller to give a thorough good pull at both the ears of the faultfinder. The bird thus crawled on, duly and properly, to the safest verge of inanity. In fact, its progress was satisfactory in the extreme. Nevertheless, Nature occasionally triumphed over training, and when the morning light peeped into the bird's cage it sometimes fluttered its wings in a reprehensible manner. And, though it is hard to believe, it pitifully pecked at its bars with its feeble beak.

'What impertinence!' growled the kotwal. The blacksmith, with his forge and hammer, took his place in the Raja's Department of Education. Oh, what resounding blows! The iron chain was soon completed, and the bird's wings were clipped.

The Raja's brothers-in-law looked black, and shook their heads, saying: 'These birds not only lack good sense, but also gratitude!' With textbook in one hand and baton in the other, the pundits gave the poor bird what may fitly be called lessons! The kotwal was honoured with a title for his watchfulness, and the blacksmith for his skill in forging chains. The bird died.

Nobody had the least notion how long ago this had happened. The faultfinder was the first man to spread the rumour. The Raja called his nephews and asked them, 'My dear nephews, what is this that we hear?' The nephews said: 'Sire, the bird's education has been completed.'

'Does it hop?' the Raja enquired. 'Never!' said the nephews. 'Does it fly?' 'No.'

'Bring me the bird,' said the Raja. The bird was brought to him, guarded by the kotwal and the sepoy and the sowars. The Raja poked its body with his finger. Only its inner stuffing of book-leaves rustled.

Outside the window, the murmur of the spring breeze amongst the newly budded asoka leaves made the April morning wistful.

Excerpted from: V. Bhatia (ed.) 1994. Rabindranath Tagore: Pioneer in Education. New Delhi: Sahitya Chayan.

The Learning Network Initiative

Substitute the parrot for the modern day child (of school-going age, may or may not be in school), the stuffed leaves for the often-meaningless curriculum, the cage for the school and the rajah for the government and the education system. You have a child who grows up in an artificial surrounding completely de-linked from the world around him and unable to live in harmony with it.

Many educators and groups who are not satisfied with the existing system have found various approaches that enable them to address many of these issues. Some of them have come together in small groups. They have been evolving environments that could give opportunities for learning as a whole to take place. They have been finding educational activities of a more interesting and motivating nature to eliminate monotony. They have demonstrated that when conventional mechanized processes of teaching are dropped the school can become an active, dynamic and exciting center of a community responsive to students, families and communities.

Our hope with this Learning Network is to provide a meeting place for all these ideas and innovations and enable all groups involved to learn and benefit from.

- [Background and Motivation](#)
- [Our role](#)
- [Regional Conference in Bangalore, January 2003](#)

Background and Motivation

Asha today works with partners in India in trying to make education opportunities accessible to children from poor economic backgrounds. Our interaction with different groups has exposed us to many differences and inequalities in the quality of schooling experience the children go through. It has also led us to question the role of education and schooling. Education should help us to observe and learn about the various aspects through out our life. Education should continue to encourage the spirit of enquiry in all of us. It should not only be meaningful at a personal level, but should also help achieve a sense of social justice, and respect for fellow human beings. The ultimate objective of education should not only be to create a balanced individual but also a balanced society where everybody is assured of a living wage and a right to social freedom.

Schools that are seen as a place for learning do not always encourage every child's curiosity. In many cases the schools children go to follow a conventional stream of education that does not ensure a child's learning. A lot is taught but very little is learnt or understood. Knowledge is treated as disjointed fragments of information with interconnections rarely explored. Relationships with surroundings or society find rare mention. The ideal education system should be driven by the nature and needs of the local community. The system fosters very little nurturing for a person as a whole and relies more on just one-track development - so called the "intellect".

Majority of the schooling experience for a child is spent on learning a limited set of skills. With a focus on training students for a set of limited jobs the school system de-sensitizes children to the environment and nature and segregates winners and losers while leading to extreme competition (instead of co-operation). Even skill imparting is done in a very poor manner especially in schools catering to children from poor economic backgrounds. Performance in exams that often test only the ability to recall memorized information is given utmost importance leading to an environment that is rote.

Many reports on the status of education in India highlight the dismal experience of children in terms of any actual learning and indicate that there is a strong need for social, pedagogical and qualitative improvement in existing educational system. With very few exceptions children from poorer socio-economic background have a much harder task in increasing their well being using the conventional education system. Today's schooling system addresses a limited skill-set. Rural, village-based skills have no place in the curriculum. A person from a poor rural background feels alienated and is also sometimes unable to compete successfully in the present economic system. Various forms of discrimination based on caste, gender, culture, livelihood and religion continue to exist within the school structures. One could say that the current schooling system implicitly provides an inherent disadvantage to these children thereby rarely changing the existing societal structures.

How can we address problems in the existing conventional system and find out approaches that can bring out the capacity and confidence to handle different situations arising in one's life - economic or social? Can education also address the fact that we not only require subject knowledge and skills for our living but also a spirit to enquire into our basic human problems? Can education become person and ecological centered instead of just economic centered? How can education play a role in bringing about socio-economic change? How can we bring about a change in the attitude of the socio-economically advanced sections of society about the problems of the conventional education system (though these people are the beneficiaries of this system) and sensitize them to the socio-economic problems arising out of this system? At the least, can we enrich the experience of the socio-economically disadvantaged children in the conventional system?

Our hope is to help create, participate and learn in a network that can find answers to these questions. Our hope is that as this network evolves it will address problems with conventional education in different ways and strengthen already existing individual efforts in this area. This network will be a resource for interested groups, individuals, educators, and parents seeking meaningful approaches to education.

Our role

The network hopes to promote the understanding of the linkages of society with schooling and education. Our aim is to be a facilitator for evolving approaches in education that will help reduce social and economic disparity and bring about a more harmonious society. Potential long-term roles for Asha volunteers and interested network members are outlined below.

- Form an educational resources center (virtual) providing information, documentation and knowledge that can be shared by different network members. This will include documenting on the web and enough information detailing what each member can provide.
- Facilitate sharing and expansion of ideas, experiments, and methodologies
- Help arrange conferences among network members.
- Help arrange workshops on various social and pedagogy related topics.
- Expanding the network over a period of time.
- Help with administrative logistics involving training and interfacing between groups.
- Help with a quarterly newsletter.

Regional Conference in Bangalore, January 2003

This conference will be the first meeting aiming to create such a network. This conference hopes to bring together individuals and groups dedicated to working on improving the quality of education - with special emphasis on making quality education available to economically underprivileged children. Based on the feedback from this conference we hope to organize such regional conferences in other states also.

During the conference we hope to explore how participants can in the overall objectives of the educational network. We hope that this conference will help not only understand each group's individual contributions and exchange ideas but also engage in discussions on whether and how a network can help us have greater impact. We hope to follow up with other groups that can benefit from learning and organize training workshops for teachers and educators.

At the conference, there will be presentations by groups that would help us understand the philosophy behind their work, how their work impacts the quality of education, their areas of strength and their experiments in education. We also will be having presentations and discussions on various other topics, like language education, role of arts and crafts in education, incorporating local culture into schooling, government schooling reform, educational resources and aids, improving quality in government schools, teachers network and suggestion and ideas from the participating groups on how this network can evolve.

The conference has been organized into sessions on (a) philosophies in education, (b) education innovations, innovations, and experiences, (c) informal discussions on education and social change, the role of religion in schooling and networking opportunities, and (d) an interesting exhibition by the attending groups with demonstrations and lectures on their education approaches and resources. The remainder of this brochure serves as an introductory document for the various topics for discussion in the conference.

Alternatives in Schooling

Asha works with many schools that attempt to provide quality holistic education to children from poor economic backgrounds. These schools come under a special category called “Alternative Education” schools because they seek to explore different alternatives in education. Such schools continue to encourage the spirit of enquiry in a child and help them make their choices based on nurturing the child’s interest and learning. A lot of importance is given to the child’s psychology at an early age so that they lose the psychological fears or complexes they may have towards learning. This encourages children to think independently and become more responsible. Most of these schools are engaged in creating and using innovative teaching methodologies that ensure that rote learning does not happen. As an example – some schools have developed excellent language teaching methodologies. Others may use creative games and experiments to explain difficult concepts in Math or Science. Some schools have changed the classroom structure to encourage better children-teacher interaction. Such creativity is typically missing in the conventional education stream practiced by majority of schools in India. Alternative education schools are often founded by persons with a strong interest in what education means and what it should provide. These schools try to address the inadequacies in the conventional system and create a space for exploring alternatives in education.

Alternative education schools that Asha supports have been especially created to not only address the pitfalls in the conventional education system but also ensure that children from poor socio-economic backgrounds are not deprived of the opportunity for high quality education. These schools assist children in taking the mainstream government exams.

Some initiatives in this area are described in this section.

- [Vikasana](#)
- [Kathalaya](#)
- [Anugriha](#)
- [Auroville Educational Resource Center](#)

Vikasana

Vikasana is a rural centre for education that provides free education to children of landless farmers from surrounding villages and caters to children of all ages. The children of migrated parents who cannot fit into other institutions also join the centre. Providing holistic and quality education, emphasis is laid on self-learning. Vikasana also takes services of resourceful people in the field of crafts, health and cultural activities.

Vikasana was started under the inspiration of David Horsburgh's philosophy of learning. The teachers at Vikasana were deeply inspired by David's work. The basic philosophy is that anyone at any level could learn what one was interested in. There was no competition or comparison - a child could learn at his pace. Education means learning - it can be enjoyable. This opportunity should be given to children who have no access to system education, like village children. Thus emerged Vikasana, Vi-ka-sa-na is the correct pronunciation. It means blossoming, opening up, spreading. Vikasana wishes that Learning...Mind...Life should blossom, grow and spread.

Some of the Aims and Objectives of Vikasana are:

- Free Education
- Giving holistic and quality education
- Emphasis on Self Learning
- Education for Peace
- Bringing an awareness of tree planting and maintaining ecological balance
- Help students to choose the career after their education

- Being a resources centre for non-formal education

Working of the Centre

The centre starts activities at 8:30 am. All the children are entrusted with duties like caring for the trees, cleaning the rooms, the surroundings, providing drinking water etc. Then the children assemble to attend singing. They sing songs in many languages such as Kannada, English, Hindi, Telugu, Tamil, Bengali, French, German and Italian. Later they do Yoga specially designed for children. Academic classes and handicrafts finish at 5 pm. Lunch break is from 1 pm to 2 pm. Some children also stay back at the centre to do their homework. The centre provides accommodation and supper.

Examinations

The children who are interested in taking the government level exams at the 7th standard and S.S.L.C level are given the necessary help by way of coaching and enrolling them as private candidates in a government school. Those who do not wish to sit for such exams are encouraged to develop their talents. Help is also provided to them by other voluntary organizations such as Aurobindo Ashram, Akruiti in Delhi and Mrichakatika in Bangalore. So far eight children have taken the S.S.L.C exam and are continuing their education at various levels. They also keep in contact with the centre for further guidance. Two girls are employed as designers in pottery units. One girl is currently teaching at the centre.

Method of Working

The children learn to read and write three languages. Other than subjects like Mathematics, Science and environmental studies, they learn handicrafts such as pottery, carpentry, sewing, origami, drawing, painting etc. Handicrafts are integrated into their daily life. Children make pots out of clay, paint murals on the walls of the school, make pots and build kilns. They also sew bags and dresses for themselves, build and repair buildings and make tables and shelves for their classrooms. They also grow flowers and vegetables. There is a library at the centre for children of all ages. The children are encouraged and motivated and not to compete and compare. The hope is that children will learn through games and activities along with the books and materials. The centre arranges field trips now and then to places of interest around Bangalore. Wednesdays are special days for the children. They do cultural activities, conduct experiments in science and write the centre's newspaper.

Future Plans

- Impart knowledge in subjects such as primary health, first aid, and prevention of illness. The center, with the help of a doctor, plans to train women and children groups to carry on the work in their family and community.
- Teenage support group. This group consisting of the ex-students, will support other needy women in their community in the fields of literacy, child-care, to acquire skills to support themselves. The Mahila Samakhya will take up the training of members of this group.
- Help the handicapped in the community in forming a support group.
- A set up consisting of a library and rooms for the teacher trainees.

This centre serves as a resource centre for non-formal education. Many individuals and NGOs have utilized the services of Vikasana. Leila Pawar who donated land has been a great supporter of Vikasana. After watching the activities of the centre over a period of years, the community welcomes them and is keen to join the centre.

Kathalaya

Kathalaya was established as a Trust in the year 1998. Kathalaya Trust has been functioning as a nodal organization with a vision to make a change in the field of education and make learning an enjoyable experience for children. For the records, Kathalaya is the first organization to implement

Storytelling as part of the curriculum in schools. Through storytelling, adventure activities, folk art workshops, teacher training workshops and field trips the organization is presently gearing itself to venture into the fourth year of working with schools.

Kathalaya is also engaged in publishing relevant resource materials on education-teaching in particular. It also conducts Teacher Training programs and facilitates setting up of Resource Centers for academic institutions. A well-experienced team of resource persons forms the backbone of Kathalaya's activities. Kathalaya has 10 trained professionals in education, theatre, bird watching, art, para sailing, rock climbing, storytelling and folk arts.

Kathalaya has opened its own Resource Center for stories, storytelling and also functions as a library and a research center. The programs of Kathalaya stretch far out into the rural areas and the organization has adopted five schools in Taverkere and Chennenahalli on Magadi Road and in Kaggalipura and Laxmipura on Kanakapura Road. The programs are conducted free of cost in these schools.

Kathalaya presently reaches out to nearly 5000 children in the urban and rural schools of Bangalore District, Madurai and Delhi. The organization has also conducted numerous workshops for teachers and trained over 1500 teachers.

Kathalaya plans to launch a Children's club in the coming months. Tentatively, the club will have regular storytelling and reading sessions, field trips, competitions, adventure activities, camps, and a newsletter for children. Children will also be able to avail discounts and gifts through sponsorships. The registration fee for the children's club is yet to be finalized.

Anugriha

The Anugriha Charitable Trust was established in 1993 by Mrs and Mr.. M.R. Raghavan as a public charitable and a tax-exempt educational trust with the intention of evolving and demonstrating alternative educational methods in India. Mr. Raghavan, a chartered accountant and computer consultant, established and operated a consulting firm in Bombay before leaving the city to start a rural school in Tamil Nadu. Aruna Raghavan is an M.Phil in English, a former sub-editor of a reputed English magazine and a former schoolteacher. The Raghavans have spent the last decade exploring and experimenting with new methods of early childhood education. In 1991 they established the Primrose Institute in Bombay where they conducted courses for parents on how to utilize alternative educational methods to foster a love of learning in their children.

In 1992 the Raghavans left Bombay and invested their entire life savings to establish a primary school at Arasavanangkadu, a village of 1500 people situated ten kilometers from Kumbakonam in Tamil Nadu. The school, named Shikshayatan, commenced operations in mid-1994 admitting 15 children aged 3 to 3 1/2 years to the first class. All of the children were drawn from low-income, scheduled caste families in which they are the first generation to receive any education.

The most important aspect of the approach of education provided at Shikshyatan is the attitude of the teacher, which should be that learning is a form of play that fosters the blossoming of the child's natural development. Learning should and can be made interesting, enjoyable, fun. A large portion of the teaching materials are produced at the school by the teachers, who customize their teaching aids to suit the interests and knowledge levels of the students.

First attention is given to the health and nutrition of the children to ensure that they have the physical energy and natural attention span needed for learning. Nutritional and medical supplements are provided to under nourished children from low-income families. Exercising and play are encouraged to build strength and stamina.

Children learn spontaneously when their interest and curiosity are awakened. 'Teaching' is confined to brief periods according to the natural attention span of each child, which is normally 15-30 minutes daily during the first two years. It is never extended beyond the child's span of interest. The student-teacher ratio is kept very low to enable the teacher to work with small groups of 4-5 children at a time while the others are absorbed in learning games or recreational play.

The act of teaching consists primarily of presenting sensory images, objects and information to the child in a pleasant and interesting manner and permitting the child to observe and inquire about the subject, without compelling the child to memorize. Coloured flash cards with large images are utilized as convenient, low cost teaching aids.

Rapid acquisition of basic reading and verbal skills in multiple languages occurs naturally by exposing the child to whole words as objects repetitively for very brief periods. In this manner, at a young age, even children of illiterate parents learn several languages as effortlessly as they normally learn to speak their native tongue.

Story telling is used to make learning fun and to communicate basic values of goodness, beauty, harmony, responsibility and right conduct. Information on people and other living things, places, history, geography, and other cultures are presented to the child in the form of stories, pictorial information and explanations combined together to present facts in a living, integrated context rather than as a series of separate divorced subjects.

Rapid acquisition of basic math skills is achieved through the use of number line method, which enables the child to physically experiment and act out different combinations of addition and subtraction.

Auroville Educational Resource Center

Auroville is a township near Pondicherry, inspired by Aurobindo, the revolutionary turned spiritual leader during India's struggle for freedom. Aurobindo called for spiritual regeneration of India as the path for rebirth of India. He started as a spiritual leader in Aurobindo Ashram in Pondicherry. Auroville was founded by The Mother, a French lady whose real name was Mirra Alfassa. She took Aurobindo's teachings and popularized them for the layman. She founded the city of Auroville based on this philosophy. The inspiration for Auroville, stemming from the writings of Sri Aurobindo and the encouragement of the Mother, led the Sri Aurobindo Society, based in Pondicherry, to persuade the Government of India in 1966 to accept and support the project (for auroville), which was then put before UNESCO for its endorsement. The city is within a 3 km radius - a multinational, multilingual and multicultural population living within its limits. Auroville has many activities including several schools, research institute and other establishments. The research institute conducts research on energy, agriculture and many other areas. At the center is the Matrimandir, the Spiritual center of Auroville. Auroville mostly uses local resources.

The following is a paper prepared by the Auroville Educational Research Centre for this conference.

Important Components Of Education

- Creation of a learning environment that imparts quality education and cultivates precious values

Introduction

Quality education for all the students involves three very important components. One is the emergence and the nurturing of life skills, not in the sense of vocational skills, but in the sense of problem-solving skills, creative and critical thinking skills, self-directed learning skills in the students. The second is the imbibing of precious values like Truth, Idealism, Heroism, Perfection, Endless Progress etc. The last component is the creation of a learning environment, which

enables the students to learn according to their learning needs and levels, and at their own pace. This component is the most essential for taking into effective consideration the first two components.

Why The Need For These Three Components

1. Skills for processing the information.

As everyone knows, an immense information explosion has occurred in the last two decades, and it is continuing rapidly with the increasing use of Internet. In the Indian educational system, the effort till now is to compress as much information as possible in the curriculum of the students, and present it to the students in the form of textbooks, which are used as the chief or even the only source of information. The students are expected to 'learn' them; this is a euphemism for the retention of the information in the mind. Examinations are designed essentially with the view to evaluate the capacity of the students to recall this information 'learnt' by them and to use them in the context of finding answers to the questions given.

In the modern day this information lies everywhere in the daily life of the student – nature, T.V., radio, newspaper, audio and video cassettes and books of all kinds in abundance, and above all the Internet, which replaces in a mind-boggling manner the need of textbooks as the only source of information. Further, the Internet makes the task of retention and recalling of the information from the brain redundant because it does both the jobs admirably and efficiently.

What is important is the acquisition of the capacity to process the immense amount of information made available, – of whatever kind and in whatever quantity. Here afterwards it is absolutely essential that the students learn all kinds of skills, like critical and creative thinking skills and problem solving skills, for processing the information so as to use them for their life.

2. Imbibing precious values.

Efforts are made half-heartedly or quarter-heartedly (!) to 'impart' values through textbooks, through teaching and through preaching. Knowledge of these values is also acquired from books, story-telling cassettes and films containing mythological stories or biographies of great men, which give to the students a vivid idea of how the values like Truth, self-giving and similar values were practised to their highest perfection. But there is no use in acquiring the knowledge about values without living them.

For example, take two of the most important values like Progress and Perfection. They can be learnt best only by living them. The idea of Progress and Perfection, that is, the knowledge or awareness of them, can be got from such sources as mentioned above. The practice of it in the daily life context can happen in the life of the student in the very process of learning.

3. Creation of an appropriate learning environment.

The two components mentioned above can be taken care of only when a learning environment is created in which the students can acquire the needed life skills and live the noble values even while learning.

Let us take the values of Progress and Perfection. They are associated in the life of the student with more marks as Progress and the first rank as Perfection. In life the former is measured by the acquisition of more and more things, like money and prosperity, and by the increasing success in career and status, and the latter is measured as reaching the topmost in career and status. This leads to competition, which, in turn, breeds ego. Real values are acquired not when they are based on ego but on the oneness of life, on the increasing feeling of others as oneself. A school can create a learning environment where this feeling is fostered, and there the students can

acquire it naturally by living it in the process of learning.

Educational Methods In Which These Components Are In-Built

There are several educational methods that create such a learning environment and that enable the students acquire both competence as well as values. These methods are effectively applicable from the preschool to higher secondary levels. They are Glenn Doman method, Rishi Valley method, Phonic Sounds method, Audio Tape method combined with language games, Thematic Project Work method, Education by Design method, and spiritual methods. These methods are used all over the world but in a piecemeal manner. Efforts are made to use these methods in an integrated manner in Auroville schools and in some other places.

Glenn Doman method enables the children to acquire reading skills and general knowledge very fast. Rishi Valley method enables all the students acquire the needed learning competencies at the primary level fully well and imparts to them in a natural manner values like helping others, cooperation, friendliness and many others. Audio Tape method combined with Language Games enables the students to acquire all the four essential language competencies easily and well. Thematic Project Work and Education By Design methods enable the students acquire important skills like problem solving, communication, organisation, leadership, critical and creative thinking etc. in an abundant measure. Spiritual methods enable them not only to acquire knowledge but also to live spiritual values like Silence, Truth, Love etc. Use of the latest educational technologies can be admirably incorporated in all these methods. An integrated use of these methods can effectively and intensely establish a powerful learning environment.

School Reforms

To create such a learning environment it is absolutely necessary that somewhat radical reforms be made in the present system of teaching/learning. As there is essentially not much difference in the way in which both private and government schools are organised, whatever ideas for reforms given below are applicable to and needed by both.

1. The first and foremost point to be focused on is that the learning in these schools should be learner centred, that is, child/student-centred. The teaching/ learning strategies should start from where the learner is and what he/she needs by way of learning. Their learning levels and needs should be assessed before the teaching/learning starts. On the basis of that, the teacher should decide what the student needs to learn, accordingly design and implement the learning/teaching strategy. If possible, a tentative learning programme should be written for each student separately, even though learning competencies that should be attained by the students are the same for each level.
2. From the age of 9 onwards upto the higher secondary level it is possible to make the students become aware of what they should learn and the sequence in which they should do it, that is, their learning programme. The implementation of this learning programme can be made the joint responsibility of both the teacher and the students. The teacher should never assume the role of carrying the 'burden' of teaching because real learning is never a burden. Hence, during this implementation of the programme, the focus should be on the student acquiring the skills of self-learning. The teacher should not try to 'teach' everything to the student.
3. Examinations should not be made the chief or only mode of assessment of the students. Appropriate assessment procedures should be adopted whose sole purpose must be to monitor the progress of the students in their learning. They should be used to identify the strong and weak points in their learning so that weak points can be strengthened and strong points can be fostered. This will enable the teacher to determine the learning pace of the students and use that knowledge for enhancing the learning of all the students in the class. In the modern day diverse modes of assessment are used, which will indicate as to what to assess and how. Hence it will be easier to find out and use the right and appropriate modes of assessment. It is also possible to invent new modes of assessment

appropriate to the teachers' needs. Maintaining an individual portfolio for each child will enormously help in this endeavour.

4. A tentative time frame can be decided for learning each topic, and, if possible, for each student. There should never be a uniform and rigid timetable, applicable to all the students.
5. Administrators should facilitate the student-centred role of the teachers. As the teachers focus on nurturing and fostering the learning of the students and on helping the students in tackling and removing the learning difficulties faced by them, so the administrators should focus on removing the hurdles in the student-centred functioning of the teachers and ease their work.
6. The administrators should arrange for the right kind of training for the teachers, according to the needs of the teachers. The training can be such that the professional skills of the teachers are regularly upgraded. The administrators should organise educational trips for the teachers to get exposure to the innovative and effective educational methods, and to the use of latest educational technologies for enhancing the learning of the students. They should arrange for regular one-to-one meeting of more experienced teachers with less experienced teachers so that the latter can get help from the former in dealing with the difficulties in their work. The experienced teachers can provide the help with more understanding than that which can be had in cluster level or block level meetings.
7. Use of library and other resources should become a way of life in the learning process. In using innovative and effective educational methods it is imperative that both the teachers and the students need to refer to various educational and information resources for teaching/learning their topic. Librarians, trained appropriately and working in tandem with the learning needs of the teachers and the students, will become a god-sent or administrator-sent (!) angel in the working of the school. Procedures can be introduced so that the choosing and buying of books can take place in consultation with the teachers and the students.
8. Model schools should be first established incorporating all the above reforms in their functioning.

Educational Resources And Support

For such learning as described above to take place the teachers and the students need to have diverse kinds of educational resources and support. The foremost among them for the teachers are training manuals and facilities, and for the students the right and effective learning materials.

It has now become possible to get training in the use of all the methods mentioned above. Training in the use of Glenn Doman method can be got from Shikshayatan in Arasavanangkadu in Thiruvarur District of Tamil Nadu and Isai Ambalam School in Auroville. Training in the use of Rishi Valley method can be had at Rishi Valley in Andhra Pradesh. Isai Ambalam School in Auroville can provide an in-service training in the use of this method. Training in the use of Audio Tape method and in designing the language games to go with it can be had at both New Creation and Isai Ambalam Schools in Auroville. Training in the use of Thematic Project Work and Education By Design methods can be had through trainers specially brought in from Antioch University in U.S.A. which is using these methods for all the learning taking place in its campus. Both the schools mentioned above can give in-service training in these methods. Training in the use of spiritual methods can be given in Auroville by Subash and Lourdes through camps organised for practising the yogic technique of Consecration. Training manuals for all these methods are under preparation in Auroville.

A resource base is being created by Auroville Educational Resource Centre (AERC) which is gathering as well as creating learning materials in the form of manuals, books, audio and video

materials, CDs. AERC has quite a good collection of resource books to help in using all the above methods. It has made a plan to prepare audio and video learning materials for using these methods. It has already prepared two CDs demonstrating the teaching of 6 Language Games, one video cassette on the practice of Glenn Doman method, one CD on Science Songs on Medicinal Plants, and one CD about the Best Teacher from the point of view of the children. (The preparation of all these CDs was funded by Asha Organisation of U.S.A.) It has planned to prepare 8 CDs containing Language Games, one CD for using Audio Tape method, CDs for helping in the use of Rishi Valley method, Phonic Sounds method, Thematic Project Work method, and Education By Design method, 4 more CDs about the Best Teacher and 4 CDs about the Best Student. It has also planned to prepare training manuals for all these methods. Further there is also a plan to print several booklets to help both the students and teachers. Networking with educational organisations aspiring to provide quality education to the learners will be greatly helpful. AERC is presently exploring the mode of such a networking.

Conclusion

One of the wishes of Mother of Sri Aurobindo Ashram for Auroville was that it should be a place for 'accelerating the evolution' of the human being. In fact, the whole world has now become a place for accelerating the evolution. The path of evolution is from matter to life to mind to beyond mind. Humanity has been gradually developing its life and mental content to their maximum. In the last few decades the pace of this development has become very rapid. When such a maximum is reached it is quite natural to seek to go beyond. In humanity this seeking is being expressed as a wish to go beyond mind, to reach a new level, to chart a spiritual course in life. Creation of such a learning environment as mentioned above imparting quality education and cultivating great values will go a long way in 'accelerating' this development in a natural and harmonious way.

Working with the government

Working with the government has been can focus on three areas: working on government school improvements, government school curriculum interventions and education reform support.

Government school improvements

Asha works with partners to reform the type of education that is provided by government schools. Government schools in India cater to the poorest sections of society and have suffered from years of indifference. They are plagued by several problems including poor infrastructure, poor teacher attendance, bad teaching quality and complete lack of sensitivity to the communities they cater to. There are several groups in India whose specific mission is to reform the government schooling system since most of India's poorest send their children to government schools.

Asha has been working in conjunction with several partners in making improvements to infrastructure and quality of schooling. In some cases we have supported social workers who work with existing schools to make changes. We have also been involved with infrastructure improvements in some government schools. We have also supported fellowships to individuals who have taken up the task of reforming the teaching quality of a group of schools.

Government School Curriculum interventions

Several groups in India are involved with creating innovative curriculum in different areas such as mathematics, languages, sciences and new areas such as environmental awareness, social issues and health-care. Some have chosen to work with government schools to ensure that the quality improvements being made are available to children of poorer sections. Asha is working with partner groups in providing support towards developing prototype educational material, conducting teachers training and awareness workshops, researching future areas of work.

Educational Reform Support

Asha volunteers have been actively involved in campaigns involving review of government proposed curriculum frameworks. We have also actively supported innovative education

experiments. In cases where innovative reform has run into problems with the government we have actively shown our support for quality education initiatives and campaigned along with our partners in India. The basic premise behind these interventions is the firm belief that the State should be held accountable for providing affordable, yet quality education to each child.

- [Akshara](#)
- [Avehi Abacus](#)
- [Suvidya](#)

Akshara

Akshara, an initiative by Ravi Aluganti, an Asha-Fellow is described here. This is reproduced as written by Ravi Aluganti. This programme is named as 'Akshara'. The word Akshara means alphabet/ education/ learning and it also means 'without an end' in Telugu, signifying that there is no end to learning.

The mission statement of Akshara is: " To provide educational experiences that are truly joyful and realise the potential of every child, even while equipping them with skills to face tomorrow". Learning needs to be a more child centered activity rather than a teacher directed one. We try to get the children work with their hands, make them talk and discuss and most importantly make them think for themselves. We also believe that when learning is made meaningful to the child and the parents it ensures regular attendance and continuation of their education.

At the same time we understand the importance of following the curriculum prescribed by the government. Keeping the above considerations in mind we have been developing activities for children of classes 1 to 5 so that, they enjoy learning.

My work at Madanapalle started in August 2001. I have been working with fifteen primary schools in the villages around. Every six months I have been able to interact 12 times with each one of these schools and have done more than 18 different activities with the children. On every working day I go to two schools and spend half a day at each school. I have been able to understand the children and work with them. I have built a working rapport with all the teachers.

The activities that are being developed are in the following areas, but we try to integrate the subjects wherever possible.

- Art and Craft
- Language Learning
- Mathematics
- Environmental Studies

Session 1 – August 2001 to January 2002

Art and Craft

In art and craft we got the children to explore with different media; drawing was done with pencil, charcoal and colour crayons. Painting with poster colours was introduced; we even experimented with natural dyes using leaves and flowers. We had several sessions on paper folding (origami) and cutting. Greeting cards were made using pressed flowers.

This is for the first time that art and craft is being done in these schools. Children love this particular session. It is very satisfying to see joy and happiness in children when their work is displayed in the classroom or when they take it home to show to their parents.

Mathematics

In mathematics the topic being taught in the regular classes during Aug/Sep was 'Fractions'. To

be in coordination with what is being taught in the regular classes and keeping in mind the curriculum, we devised a hands-on activity on the same topic.

The children made 'Fraction sets' with card. They made several discs cut into various fractional parts. They had to cut each part accurately and colour the pieces carefully. This involves a lot of art and craft skills.

The lower classes used this set to understand the concept of whole, part of and division, while class 3 used it to understand the basic concepts of fraction terms such as numerator, denominator, proper and improper fractions. Class 4 and 5 used the set to understand the concept of addition, subtraction and comparison of fractions.

Children were able to understand the concept of fractions more clearly using this set because it is concrete, they can see and feel with their hands. They can put together actual parts to add up or take away parts to subtract and to compare all they do is, put one piece on top of another. Only when a concept is understood clearly one can move on to abstract thinking. It was interesting to see teachers using this set to solve problems from the textbook.

The next activity was on 'geometry'. This topic was more like an art and craft activity rather than doing mathematics. The lower classes learnt to identify and name the basic shapes. Children made collages using coloured paper shapes drew pictures and patterns using shapes. They made paper hats and used coloured paper shapes to decorate it. While doing these activities the children get to know the names of shapes.

Children of classes 3, 4 and 5 did the topic 'Solid Shapes'. They learnt to identify, name and relate solid shapes to surrounding objects. The children were given various screen-printed networks. When these are cut, folded and pasted they form into different solid shapes. Using these solid shapes they learnt the properties of solid shapes such as surface, edge and vertex. Here again a 3D model was important to understand this notion and when the children actually make it, there is a lot more difference to the way they learn.

Origami was also used as an activity to teach geometry. Without using scissors or glue we made a cube with paper. This cube can be dismantled and put together like a puzzle. It was fascinating to see teachers struggling to put it together while the kids were able to do it in seconds!

We got the children to play different number games, which helped them in building mental computation and strategy skills. The younger children played another game with dice and seeds, which gives practice in building ones into tens. It was used to develop the concept of place value.

Unfortunately many children and teachers have an aversion towards learning mathematics. To make children enjoy mathematics the teaching needs to be interactive and hands on. This way of teaching will help in understanding the basic concepts. Once the basic concepts are clear one only needs practice for achieving perfection in computation skills.

Environmental Studies

In EVS we did three lessons with hands on activities. When the lesson 'Life Cycle' was taught, we got each child to make a 3-D model with card. This is a beautiful model to demonstrate various life cycles. A lot of art and craft skills are involved in making this model. When children make something with their hands they feel a sense of ownership and confidence on their work. Children also get immense pleasure in showing others what they have made.

While doing the lesson 'Human Body' we did an activity where the children draw their body maps on old newspapers with paint, later they plot the various parts onto this map and label them. This is followed by a discussion to understand the functions of these body parts. After this they complete a worksheet to reinforce what they have learnt.

The lesson on 'Plant Life' was more like an art session, rather than a science class. The objective of the lesson was to identify and classify leaves according to their groups. We got the children to collect different leaves from around the school. We helped them to trace the leaves onto paper with crayons; very interesting shapes and patterns emerged. While doing this activity the children very carefully observed the different leaves, learnt to identify and classify them.

Language Learning

The four basic skills of language learning are Listening, Speaking, Reading and Writing. These four competencies have to be established in any effective learning context.

We had story-telling sessions and encouraged both teachers and children to tell stories. Sometimes the stories were illustrated and displayed in the class. We made alphabet sets (Telugu and English); using these sets younger children learnt to identify letters. The older children played word games such as word building with the alphabet sets. We also made worksheets, which were activity based to assess children's level of learning.

Outdoor Education

Outdoor education is an important aspect in the learning process. On Jan 10 we organized a large scale outing for eight schools. We took 330 children from these schools to the town for a circus show. This was a good occasion to break the monotony for the children. It was also an opportunity for children to meet fellow kids from other schools.

Session II – February 2002 to July 2002

Environmental Studies (EVS)

The schools reopened on 12th June. On my first round of visits I did a science activity with the children of classes 4 and 5. All of them remembered the body mapping activity we had done during the previous year and wanted to do something new. The first lesson in class 4 text book is about 'Various Parts of Our Body' and in class 5 it is 'Various Joints of Our Body', I combined both the classes and did an activity where all the children had to make a puppet with card, the limbs had to be sewn up with needle and thread. A broomstick is pierced through the hands of the puppet. When the stick is rotated the puppet makes amusing gymnastic movements. The children loved making and playing with this toy and also learning about the various types of joints in our body.

During my second round of visits I continued with the same topic. Together, with the help of children we made an 'Our Human Body' poster for the class in such a way that when the top layer is removed we can see the 'Inside Our Body'. Many of the internal organs and structures were cut out of card and coloured. These organs and structures have tabs so that they can be added to the poster in the appropriate place. This poster was also used as a tool to play a game to review and assess how much the children have learnt in the lesson. By doing this activity the children were able to identify the various internal organs and understand their functions. This also gave the children a perspective on where the organs are inside the body and in relation to one another.

The activity followed by discussions helped the children to realise how our bodies are amazingly complex and are beautifully designed systems. We also talked about the care we should take to keep ourselves hale and healthy and discussed about the negative effects of alcohol, tobacco chewing and smoking, hoping that they will be able to stay away from these when they grow up and also help bring awareness among their parents about these dangers.

On the third round of visits I got the children to make a working model of the elbow with card and paper, this model shows how muscles move bones at joints.

Mathematics

Class 3 math has a lesson on symmetry and reflection, I combined classes 3, 4 and 5 and made the children to do 'string painting' and 'blot painting'. These are art activities but I found them very

helpful in showing children what symmetry is. In string painting we dip a piece of cotton thread in paint. We fold a piece of paper in half, on one side of the paper the string is placed in such a way that it makes curves and loops. The other half of the paper is folded over the string and held firmly with one palm, with the other hand the string is carefully pulled out. When the paper is opened we find beautiful patterns, which are symmetric. Blot painting is a simpler version; a piece of paper is folded in half. On one side of the paper a few blots of paint are dropped, now the other half of the paper is folded over the paint and pressed. When the paper is opened we find interesting shapes, which are symmetric. Several colours were used to make the patterns look beautiful.

As a continuation of this topic on my next round of visits I got the children to make Kaleidoscopes. Three strips of mirrors were put together like a prism and were fixed with rubber bands and tape. One side of the prism was covered with translucent plastic paper. Beads and bits of bangle pieces were put in through the open end of the kaleidoscope. When we see through the open end with one eye we find wonderful symmetrical patterns. When the kaleidoscope is turned slowly, the patterns change from one position to another. Children were amazed with this toy, some of them tried to transfer the designs on to paper. We looked for symmetry in nature and tried to copy this on to paper.

For each of the 15 schools I made a set of Soma Cubes. Soma Cube is a very interesting mathematical toy made with wooden blocks. This is a 3x3x3 cube with 27 separate pieces, which are stuck into seven special shapes. One of the popular tasks is to assemble all these seven shapes to make a cube. There are 230 different ways of putting this cube together. Unlimited number of interesting three-dimensional structures can be made with these seven shapes. This toy/puzzle not only gives the child entertainment but also helps in understanding concepts such as size, dimension, area and volume.

For all the schools, I made basic shape sets. Each set consists of 15 shapes made out of plywood and painted with bright colours. This set was used to introduce shapes, attributes of shape, size and colour and to understand the properties of plane figures. The shapes were also used to trace patterns on to paper and colour. The children were then encouraged to identify shapes in objects around them and in the nature.

To provide the children with a variety of experiences in understanding geometric concepts I made Geoboard sets for all the 15 schools. The Geoboard set consists of 3 boards, 5x5 pin board, 11x11 pin board and a circular pin board. Rubber bands are used for making different shapes on the Geoboards. While doing activities with these Geoboards children are able to construct and explore geometric figures, understand the concepts such as angles, measurement, perimeter and area.

Art and Craft

We have started making folders for the Conference on Alternatives in Education, which is being organized by ASHA. The folders are being made with hand-made recycled paper. The children are helping in screen-printing and making designs with pressed flowers on the cover of the folders.

During this session I have started using the books 'Art and Craft' by Nicholas Horsburgh and published by Oxford University Press. This is a series of five books, which are very well written and give plenty of new ideas for our activities. The books are progressively graded so that the children can develop certain important skills and techniques to express their creativity.

Avehi Abacus

We live in a media-saturated culture, a culture of paradoxes, where the information explosion co-exists with shrinking spaces for public debate. The communications revolution has tended to serve the interests of the powerful. More than democratising access to knowledge, it has worked towards spreading consumerist cultural values. Avehi is an organisation, working to facilitate

community access to relevant media resources. Avehi, an audio-visual resource centre, was launched in 1981 as an initiative of the Avehi Public Charitable Educational Trust. It was founded by individuals from various fields, committed to empowerment through education and to using the potential of audio-visual media to facilitate rational thinking, social awareness and social change. Avehi works towards promoting audio-visual modes of communication and alternative media for widening horizons, for raising the level of education and social awareness, for promoting values of equality, social justice, gender sensitivity, secularism, communal harmony and human rights.

Avehi's media support activities aim at meeting the needs of educational institutions, non-formal education units, training institutions for human service professionals, NGOs, community based organisations, individual activists and others

The Avehi-Abacus Project was initiated by Avehi in 1990, to develop a supplementary curriculum for schools. The founding inspiration behind the project is renowned educationist and theatre personality, Smt. Shanta Gandhi (Padmashri recipient).

The need for Abacus was felt for the following reasons:-

- The present school curriculum is fragmented and is not always related to the child's every day experience; it does not help the learner to develop sufficient thinking and analytical skills which would equip her/him to make choices in the rapidly changing world, particularly when the child is bombarded with information.
- The control function of the present-day school is reinforced at several levels:
- The manifest content and the latent symbolic meaning structures of the curriculum, which promote certain values, stereotypes, world views etc.
- The demarcation of the curriculum in terms of specific subject areas and in the process, the definition of what constitutes, valid knowledge and a compartmentalisation of the realms of knowledge and daily life.
- The system of relationships that the school and the classroom situation perpetuate.

Avehi-Abacus aims at attempting a redefinition in all these three areas. It seeks to establish a space, within the school system but outside the existing curriculum where alternative curricular and pedagogical strategies are explored. Avehi-Abacus works within the existing educational structure to make the school experience more relevant, meaningful and enjoyable for children as well as teachers. It is concerned with both, what is taught in school and how it is taught. The programme has designed and developed a foundation course to enrich and supplement the existing curriculum in schools and NFE centres and in teacher training colleges.

A. The Avehi-Abacus Foundation Course for Children

With the consent of Municipal Corporation of Greater Bombay, Abacus started testing out its curriculum in a Hindi medium municipal school in 1991. It continued working with the same group of children who progressed from Class III to Class VII in 1995. Abacus also conducted teacher-training workshops to enable schoolteachers to use the learning package in their schools. Based on this experience and its evaluation, Abacus developed a modified curriculum. This curriculum lasts for 5 years from classes III to VII. At present, the project works with more than 25 municipal schools (approx 1600 children and 35 teachers), 2 private schools (approx 1000 children and 15 teachers), 35 NFE centers run by 4 NGOs (approx 1800 children and 35 teachers)

In the formal system, it works as a five-year foundation course for Classes III-VII children and in the non-formal system, it serves as a post-literacy program for children between the ages of 8 and 12 years. In both contexts, the goal is to develop the children's skills of thinking, analyzing and making choices. The emphasis is on values that will help them live and work together in a spirit of understanding and harmony.

B. The Avehi-Abacus Foundation Course for Teachers

As the person directly interacting with children, the position of the teacher is one of tremendous influence and responsibility. Yet the teacher's role in policy-making and curriculum development remains marginal.

The Avehi-Abacus programme recognizes the key role of the teacher. The foundation course for teachers serves to fill in some critical gaps in the area of pre-service teacher training. It seeks to strengthen the teacher's ability and motivation to go beyond the prescribed syllabus and become an active participant in the search for a more meaningful system of education.

It is in this context that Abacus has prepared a Foundation Course for Teachers spanning two academic years of the D. Ed. curriculum. The Foundation Course aims to empower teachers with the skills and attitudes that are critical in implementing progressive educational policies; it seeks to make the teacher an active partner not just in the educational process but also in the larger process of social change.

Abacus attempts to provide the children with a way of thinking, of looking at and interpreting the world. To help the child to see the linkages between

- everyday experience and what is learnt formally
- apparently disparate subject areas
- modes of living of different civilizations
- the world of nature and culture

The emphasis is on acquainting the children with the sources of information available all over and to equip them to use this information to solve the problems they face.

The program begins with a game in which children identify the basic human needs in the simulated situation of a bazaar. Each of these needs - food, clothing, shelter, air, water, health, education, work and leisure - is then explored in detail in subsequent sessions in Classes III and IV. In Class V, the emphasis is on the resources of the earth - on how these resources make life possible and link all life-forms in an inextricable web, on the changing relationships between humans and their environment and among human beings themselves. The subject of discussion in Class VI is the inevitability of change in all aspects of our lives, a critique of the idea of progress, as well as the search for alternative ways of living. In Class VII, the focus shifts to the individual, the areas for exploration include the recognition of each individual's identity within the context of the numerous groups that he or she is part of, and the need to arrive at some norms that will help a variety of groups to coexist in harmony.

The formal system is not designed to recognise and evaluate learners with regards to these life skills. Each Abacus session is designed with a component of evaluation - but it is unique, in the sense that it seeks to evaluate the teachers performance in relation to the children's performance i.e. Towards the end of the Abacus session, children usually perform an activity - which is either done in a group or individually by each student. The activity is in the form of discussion, drama, art or craft, debate or survey leading to a presentation. The presentation reveals the level of comprehension and assimilation by the children of the topic under discussion. It is during a progressive, continual experience of five years (from age 8 to 14 years) that students are exposed to the Avehi-Abacus programme; once every week. Thus children are given sufficient time to acquire and develop new skills.

Suvidya

Suvidya is an educational resource group in Bangalore and has worked on many projects that provide for curriculum enrichment in schools. They have developed models and teaching aids for

math and science teaching in schools. Some of the projects that Suvidya has worked on are listed below.

- Maths Corner at Belgaum Science Center
- Establishment of Math labs in School Science Centers in Karnataka
- Establishment of Maths, Science and Kannada labs in 42 government primary schools in Raichur district, Karnataka
- Establishment of Maths Centers in regional centers in Belgaum, Raichur, Mandya and Kolar districts, Karnataka
- Production of self-learning Geometry kits (for high school students)
- Multi-purpose algebra kit
- Place Value Kit

Feedback from the earlier projects

<p>Math Lab in School Science Centers. Projects 3 and 5 in Appendix 1 of the project proposal. These were a total of 114 math labs developed under Karnataka Rajya Vigyan Parishad for high school children. The first phase was 17 labs and the second phase was 97 labs</p>	<p>There has been no formal feedback on how much these labs are being used. Based on informal interactions with the teachers in other forums, Suvidya believes that about 30% of these are being used. When KRVP wanted a third phase with another 220 labs, Suvidya declined to do the project for want of feedback.</p>
<p>Establishment of math, science and kannada labs in 42 government schools. This was part of a Plan International project, done through the Samuha group. The Math kits had 100 items each, the Kannada kits had 45 items and the Science kits had 41 items each.</p>	<p>Of these 42 schools, 3 schools do not use the kits. Suvidya believes that the other schools use these kits. These are in the nature of trainer's kits; the teachers in the schools make most of the items in the kit from locally available materials.</p>
<p>Establishment of Math Centers: This was a project funded by DPEP for establishment of math centers in the rural centers in Belgaum, Raichur, Mandya and Kolar.</p>	<p>There was 380 centres in these districts that had covered on an average of 40 schools. This project was carried out from 1989-99 and Suvidya estimates that usage of these math centers has been 30-40%.</p>

The geometry kit was developed for NCST, GOI for obtaining feedback on the geometry kits. 800 geometry kits were developed and the feedback has been good.

The algebra kit has been put through a field test and feedback has been obtained from teachers, resource persons and parents and children. The overall feedback has been positive. Twenty teachers participated in the trial workshops and were asked for feedback on the idea for the kit (integration with pedagogy, the way the ideas are explained and how the kit helped the students), the manual, the way the trial was conducted and for overall comments. Overall, the teachers have felt that the kit has improved the teaching and learning experience. There were some reservations about its use in large classrooms and in teaching abstract mathematical concepts using such models. A set of resource persons (including experienced teachers and opinion leaders) was also interviewed for feedback. Their feedback has also been positive.

Suvidya gave away about 300 kits to children and parents who responded to newspaper advertisements to collect the kits for free and use them on a trial basis. Parents and children have also given favorable comments about the kit. Suvidya plans to present the results of the field trials to the Karnataka Government, government organizations like DSERT (Directorate of State Education Research and Training) and other autonomous organizations which enjoy the support of the government like BGVS (Bharathiya Gnana Vignana Samithi) and request for funding to make this kit available on a much wider scale to government schools throughout Karnataka.

Suvidya is currently planning a project for the development of kit for explaining the concept of Place value to children. It has been Suvidya's experience that many children do not understand the concept of Place Value correctly. This kit is intended to resolve this difficulty. The kit will consist of 10 aids, 10 activities, Worksheets, Place Value Jokes, History of Place Value, Common Errors, General Information and User's manual.

The kit that will be developed by Suvidya will be for use by teachers. The components of the kit can be duplicated by children using inexpensive locally available materials. The kit is multi-grade and has the potential to be linked to the textbook. It is simple and interactive and several language versions are possible.

Community Approaches

Asha supports different community awareness programs. These programs provide education that is aimed at raising awareness on various issues and creating an informed society. They empower people with information so that this will serve as an impetus for social change. These programs are located both in rural communities (tribal) as well as cities. They cover a broad range of issues including agriculture, general health, women's education and community rights.

- [Bharathi Trust](#)
- [Tamilnadu Science Forum](#)
- [Timbaktu Collective](#)
- [Viveka Asha Yojane](#)

Bharathi Trust

Bharathi Trust is a non-profit development organisation working for the cause of upliftment and empowerment of Irula Tribal communities living in the interior pockets of Thiruvallur district.

Since 1990, it has been working among the Irula communities in more than 60 villages spreading over 5 Taluks of the District. It has been conducting a number of development programmes such as Sangam formation, awareness camps, liaison work with government for obtaining development schemes, day care services, motivation centres for eradication of child labour, etc.

Bharathi Trust was started by Siddamma, the director of the Trust. Siddamma started her association with these people about six years back. This happened when a group of villages from this community approached her to help them out with their problems. At that time she was residing in Madras. In the process of helping them out, when she visited the village, she realized that a lot more needed to be done for these people. She had to develop the villager's confidence in her if she had to do something for them. This she did by staying with the villagers for almost two years during which she learnt of their problems. She organized cultural programmes, school for children, and other motivational programmes, which were oriented towards getting the community together. She also acted as their voice against the forces that were torturing the villagers. She also gave them a workable knowledge of dealing with the local officials so that they could be better equipped to take care of their own problems.

In the process of doing this she realized that there were many more Irula villages, which badly needed her support. This led to her activities being spread over to sixty villages in these six years. This also led her to the formation of the organization called Bharathi Trust through which she could do her job more efficiently since managing many villages single handedly would be an uphill task.

Bharathi Trust, in the process of developing the Irula community wants to see to it that the

children of the Irula community get educated so that in future they do not face problems that had been faced by the earlier generations. The objective of the trust is to set up schools in as many villages as possible in the near future.

Bharathi Trust had been running three model schools in different villages over the last few years which was primarily done with the help of local support and small funding that Siddamma could draw from CRY. They are currently implementing a project for setting up schools in 11 villages, covering 150 families and 307 children. This project is being supported by Asha.

Tamilnadu Science Forum

The Tamil Nadu Science Forum is a people's movement that has been mobilizing and empowering the underprivileged to help themselves since the 1980. The Science movements, like many others movements tries to change the way the society thinks, in this case by giving a critical understanding of science. The society decides what kind of science is done, this is especially true of today when science is no longer a personal pursuit, but is in large part a social effort, directed and funded by governments. For example, the decision that research in nuclear energy should be funded over research in solar energy or large dams should be built over smaller local water harvesting techniques [is driven by the government]. The first agenda of the science movement has been to inform the common people on what science is being done, how and why i.e. to analyze policies, educate people and mobilizing public opinion on issues.

The group was started by research scientists from IIT and IISC, who soon realized that critiquing the science policy and mobilizing people was not enough. They had to develop solutions that could be used by the common man. They developed alternate models in literacy, education, health, enterprises and agriculture. Through these models, it was attempted to restructure science learning techniques. These techniques were successfully demonstrated in a 'joy of learning' school. This was followed by training teachers to use innovative teaching methods, training village women to use health information and training farmers to use science to improve soil. In short [this was] putting into practice the promise of science - improving living conditions of people. The science movement also works towards the construction of a rational society by explaining natural phenomenon using science and countering irrational beliefs and superstitions.

From 1989-1995 TNSF developed a mass literacy campaign in 8 districts, which reached out to 2000 villages, mobilized 20,000 teachers and 200,000 learners. Most of the learners were women and with literacy came awareness and women participated in large numbers in anti-arrack (local liquor) agitations, 'learn bicycle' campaigns, employment program and credit networks. The local vested interests (arrack shops, quarry contractors) and even the government felt threatened. This led to the souring of the TNSF-Government partnership and TNSF pulled out of the campaign.

The movements that had started however, continued. Each of the districts tried its own experiments on social development. Some of the more important ones were self-reliant saving schemes for women (Kanyakumari, Virudunagar), health training programs involving training volunteers to provide individual advice on children and women's needs (Ramnad), enterprises for women (Madurai), quarry contracts for women groups (Pudukottai), working on school drop-outs (Villupuram and Cuddalore), activity based school (Vellore), and support shelter for women victims of violence (Ramnad). A lot of experiments were conducted in these areas, some worked, some failed. Just as life evolves, ideas that worked started spreading.

The focus of TNSF is now to integrate and expand ideas that have worked. In education these are innovative teaching methods, libraries for women and rural IT centers. These ideas are being nurtured and spread to new blocks. These programs reach out and save thousands of children from malnutrition and dropping out of school, help lakhs of women with credit and enterprise and health skills and help farmers improve the soil and their yield.

The strength of TNSF lies in its ability to campaign on larger issues while at the same time demonstrating how these ideas actually improve the lives of the poor and in their volunteers who take time out helping in schools, visiting villages, organizing programs, training and raising funds.

Timbaktu Collective

The Timbaktu collective is a group of activists working for over a decade in this area to organise the rural poor (especially women, children and marginalized peasants) to protect their environment and build for themselves a sustainable, decentralised and people oriented lifestyle. The main activities of the Collective are eco-restoration, alternative banking, alternative education, leadership building among the educated rural youth, awareness building about panchayathi raj and training and networking.

The basic issues they started out to address were the question of sustainability and ecology, and the imperative of building alternative people-centered institutions and practices. The collective takes a holistic approach in addressing the problems of the people they work with. Their activities include (a) regeneration of the natural resources by organizing the common people to manage their own natural resources, (b) revitalization of cosmologies and sustainable life styles by encouraging the common people to talk about their old stories and practise their cultural art forms, (c) organization and empowerment of women by means of setting up an alternative banking system, learning to read and write, talking about issues that pertain to women and their problems in particular and (d) creation of spaces for children to experience a childhood by means of alternative learning systems. All their activities involve educating and organizing the local people most immediately affected by environmental degradation so that they are better able to address the problems facing them.

The collective was recently awarded the 'Vinoba Bhave Volunteer Award' for 2001 by the National Foundation of India. They received this award for their program called 'Yuvatha' (translates loosely from the Telugu to 'youth'), which works with the educated youth of the villages (who are either self-employed farmers, or otherwise employed), to organize them into a cadre of volunteers and encourage them to remain in the village and work for the betterment of their community. These volunteers are given training by the collective through cultural programs, theatre, kolatam (a local dance form) etc. to act as a resource for the village community and eventually, as responsible members of the local panchayats.

The collective has an ongoing program for alternative education for children who have dropped out of the local government schools. They operate four day schools in different villages and one residential school in a piece of land they have named Timbaktu. Most of the children in their schools have dropped out of government schools, generally because they are frequently abused by the teachers there (either physically or verbally, in the form of demeaning comments about their caste, appearance or background), or because of the dreary nature of the government schools (overcrowded dingy class rooms and a curriculum taught without much imagination, emphasizing rote learning).

The underlying philosophy of the collective is that childhood and learning should be a joyful experience; so they employ alternative teaching methodologies in their schools to engage the interest of the children. The education they provide emphasizes hands on work as in making models with clay or hard paper. The instruction is through dialogue and the children are encouraged to be inquisitive and ask questions, rather than just memorize facts. The children are also taught about their own local customs and culture, such as the local folk lore, traditional dances and songs, and local art forms. This is so that the children do not grow up alienated from their own customs and feel secure in the value of their own local traditions.

When this volunteer visited the nature school, many of the children were engaged in activities like clay modeling, knitting and embroidery. After a while, they had a break, and they ran around and

played for a while. After a while of this, we all sat down together, and they were introduced to me, and asked me questions about my work (developmental genetics), cloning, cancer etc. One of the children was particularly well aware of the things reported in the news paper recently about the possibility of cloning humans, and asked me about this. After interrogating me thoroughly, the children performed some impromptu dances for me that they had learnt at school. It was great to watch the children enjoy themselves so much dancing and singing.

Viveka Asha Yojane

Vivekananda Foundation is a federation of individuals and organizations committed to social development and inspired by the ideas of the Ramakrishna Mission. Their goals are to establish a network of such individuals and organizations in order to share ideas and practices, and to promote activities for integrated social development. The aim of 'Viveka Asha Yojane' is to utilize existing government infrastructure (the schools) while providing motivated volunteers to improve the quality of education. This utilizes the current 'Adopt A School' scheme created by the government of Karnataka. Corporations and individuals are encouraged to adopt schools and improve it using a variety of ways ranging from teacher training programs to infrastructure improvements (toilets, drinking water, library books). India's poorest go to government schools, and improving them is of critical importance if quality education is to be made accessible to under-privileged children in India.

This program aims to improve the state of education in government schools in rural Karnataka. Seven social workers are working to develop 52 government schools and a number of educationists and scientists are involved as resource persons. The approach is three faceted. School is the focus of activities while teachers, parents and villagers are three important facets through which school needs to be improved. Involvement of all these three components as an integral part of the school activity is very important for the development of schools. A team of dedicated social workers is given training; they visit schools 5 days a week and are responsible for 7-8 schools each. During their visit to the schools they talk to the teachers and solve any problems in science and mathematics teaching that they may have. They also listen to the Head Master with regard to administrative problems and problems of infrastructure, etc. These are then resolved with school authorities or at the Central Office.

Teacher training and special workshops on topics like environment, hygiene, etc. are conducted. A district level training program is conducted for all the teachers in subjects of science and mathematics. Special resource people are invited and detailed training is given. They also work on mobilizing the community towards taking responsibility for the school - for instance in one village the villagers have now come forward to whitewash the school. Value education training for teachers is given in Ramakrishna Institute of Moral and spiritual Education, Mysore.

In addition specific surveys to identify the number of dropouts are also conducted and the reason why they dropped out; the efforts are towards getting those children back in school. We have also started planting fruit trees along with the children around the schools. A mass march has also been organized to create awareness against use of plastics and plastic carry bags and spread a message to use cloth bags. Children of these adopted schools were involved in the 'Jatha'. Some private schools also volunteered to join for the 'Jatha'.

By making use of existing government schools, this project is able to minimize infrastructure costs which are typically a huge chunk of the budget and work on improving 52 schools with the funds used typically to build and run 1 or 2 schools. Efforts have been made to involve parents in particular and villagers, so that they all contribute for the development of the school. There are School Development and Management Committees (SDMC) that consist of village leaders, parents and elected representatives. Workshops are conducted for SDMC members also. Most of the teachers have expressed that they need some special training specially to teach English. Therefore we are contemplating organizing English teaching training workshops.

There are cluster resource centers (CRCs) for a given area. CRC consists of high school teachers deputed for the purpose of improving the primary school teachers. After discussing with Chief of the CRC it was found that even CRC members needed orientation for innovative teaching. The Chief agreed that CRC can also be involved in faculty improvement and plans are being worked out to involve CRC members also.

During the course of our work we found an increasing demand for involvement of more schools. In each operational area we have adopted only about 8 to 10 schools. But nearly 10 to 15 schools falling in the areas are very indignant of being left out. They are asking us repeatedly to involve them also. It would be very meaningful to involve these schools as well. With the experience we already have we can cater to these schools with ease.

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Developing your child's senses - Alternative Schooling

A philosopher said that a child should learn on his own, without interference from the adults around. A lady told him with great pride that she had not taught her 5 year old anything. The philosopher said, "Madam, you have wasted five years; go home immediately and start teaching your child."

Probably what the philosopher meant was that we ensure that we do not pass on our own likes, dislikes, prejudices and fears to our child. But certainly teach we must. And what do we teach a child less than five?

In the preceding columns here, we have discussed reading methodologies. There is a stage of readiness that a child goes through before he begins. *We teach him to use his 5 senses*; to use them well and correctly so that they, in turn, report – developing his intelligence. The more the number of senses used to 'understand' the more complete the learning.

One of the first senses that a child uses is taste and almost immediately, touch. In just a few days a new-born knows its mother's arms. He can tell the difference between a friendly arm (cozy enough to sleep) and an unfriendly arm (he'll bawl the hospital down.) In weeks, he knows cold from warm and will tell in no uncertain terms his preferences.. A little rain or cold and the washing machine does overtime with the nappies! His entire body is so tuned to everything around him. At three months, when the doting mother starts on the solids (after advice from all neighbourhood, doctors and extended family) the baby spits it out. To him, it is new, not necessarily friendly. The mother goes into a frenzy. After the dust settles, the mother finds that she is back to the first box of cereals anyway. The truth was the baby was learning. And was not given time to complete learning one taste before the second, third and fourth were presented to him. And so a pattern sets. The mother waits for 'rejection' before she 'finds' what the baby likes! Most babies like everything; for them, orange juice or a banana is a learning game. What each tastes like, what the texture is, what it smells like...

By the time a baby is two months, he knows sounds too. The familiar sound of running water and he knows he is in for a lovely time. Something flows down him. It feels tickly and smooth. By three months, the baby knows even his daily routine. He knows when he is going to be powdered, bathed, fed, taken out... By then he can see, register, look for familiar things. This is the time to carry him so that he can look over the mother's shoulder. The world is a movie, all things are characters in it. If the mother tells the baby where she is going it would be a bonus. Not long sentences. Just, "Baby and I are going to the bath room", "Baby and I are going to the kitchen". Repeated sentence patterns and repeated action and words. The three will register a number of messages. "Baby will now eat banana, mmm, banana, sweet banana." This sounds like non-stop chatter from your side. But look at the outcome: he will have a nice fat vocabulary even if he can't talk yet! He will know what, where and how of each thing in the house, besides having 'mapped' out the entire house by the time he is five months! He will know exactly which door leads to 'tata' and from which window he can see the crows. His world is growing. To all this, you add small games. These exercises can be practised on any child irrespective of the age.

To sharpen his sense of touch, vary the texture of things he plays with. You could have a small coir mat, a soft towel, a rough bark of a tree, a stone with many edges, a painting brush, a tooth brush ...All these are to be kept aside for this exercise. Make sure that all the pieces are very large and cannot be put in the mouth by the baby.

Now, you could run each of the items on the baby's arms. But before you do, tell your baby what you are going to rub and then rub it. Say that it is soft/ sharp/ poky/ prickly. You are finessing the sense of touch.

For taste, what ever you feed him should be called out, its taste specified, said that it is yum and then fed. (It will keep your own preferences in check whilst learning what your baby actually likes.)

For sound, choose soft music, initially 5 cassettes with about 15 songs or pieces on each cassette. Ensure that they are your favourites, because you'll have to play them over and over again. Until you are sure that your baby has registered every note. That might be almost 5 months down the line. You'll be rewarded with a finely tuned ear in your child. (That you might wake up at night with the sounds of those notes going on in your head is of little consequence. Besides, it is a taste of what is going to come 15 years down the line!) When you choose the songs, you might even like to make it in as many languages as you wish. For each language, even as a raga, has its own nuances; the more sounds that are offered, the better tuned ear your child will have. Speak to your child in as many languages you know.. India is a gift to the sense of hearing. In any city, you can, at any given moment, hear at least 4 languages. The state language, English, Hindi, and a neighbour who hails from another state. So, for any city Indian knowing 4 languages is not a great feat. Your child too will learn. If his ears are tuned well, he will speak each of the languages like a native. Do not worry about confusion. Here is a joke I often crack: we have two Labrador retrievers and they can understand English and Tamil; draw your own conclusions!

With sight, sound, taste and touch becoming more acute, your child's skills at learning are also finessed. It doesn't take time or energy. Cooing to one's baby is natural; coo a little more is all that is asked! And as you coo, see the world again through your baby's senses.

(To exchange ideas on this series you may e-mail the author at info@learningnet-india.org)

Integrate Learning

At school here we had Kanimozhi, a precocious child of four and a first generation literate. She learnt with her whole being', giving her a unique prodigious 'memory'. She was like a bird – eager and chirpy. In a few months she outstripped her classmates. It is always interesting to know what makes one better than another in any given field. And so, we began studying her.

We found that she learned quickly. She had us redefine 'learning'. Learning, we learned, watching Kani, was to take any new fact, find a place for it; find other inter related facts that could be brought together. Then restore them as newer, more complex facts. Every new thing heard, seen, read, having been re-assimilated, her actions and ideas took new shape. This was the 'creative effort'. Very often, we are ourselves surprised at what we put out. We are not certain when, why or how the learning took place. Yet, when we do something that makes us smile at our own work, we can be assured that something new has been learned; something new has taken us by surprise. Having understood what was happening to Kani we decided to work on the same lines with other children in the class. In the meanwhile, as she was the only Girl in a class of ten, for two years there was a keen competition in class to do better than a 'girl'. Finally, the boys decided to find things they could do better and get on in life! Even now, her essays are more informative, more moving.

The question then is how do we teach a child to 'learn'. May be a few examples would help. Lets take a few words and find all that we can associate off hand. Main word: Penguin: bird, flippers, Antarctic, Patagonia, water bird, webbed feet (at two years). Now, we can increase the understanding by talking about their climate, their food, their enemies, their friends, and how they live (at three years); being able to tell the different specie by just looking at it keeps four year olds busy, even as stories from Durrell's books delight them. A five-year-old whose language and speech has developed enjoys learning and saying the scientific names. *Aptenoditus patagonicus* is quite a mouthful that children enjoy.

However, to look at penguins as just birds is not enough. Emperor penguins have two circulatory systems. One for the body and the other that goes round the feet alone. Blood in the feet being as cold as the rocks they stand on they do not feel the Antarctic cold. Very little blood from the feet is transferred to the main stream at a time. This information to a three year old can become an

introduction to the concept of cold blooded and warm blooded creatures, creatures that live in extreme climatic conditions and how they survive, and a study of various systems in our own body... Obviously, to go through an entire range may take anywhere from 6 months to 6 years depending on the age of the child and the complex ideas presented. We move through natural history, animal kingdom, zoos (through Durrell), animal behaviour, geography, biology. We weave together many 'subjects' to present the world as an interesting, varied and amazing place. All this can be very systematic too. A little bit of planning can ensure that your baby has an 'associative memory' – the key to a true learner.

You could: Make a set of cards the size of a foolscap. Make 10 sets of a single theme. Let us continue with the example of bird. If you can choose 10 birds that are as unlike each other as possible (penguin, ostrich, kiwi, seagull, vulture, woodpecker, flamingo, crane, pelican, peacock). These can be presented at first as pictures being shown even as the names are called out. Then, they can be reclassified as water birds, non flying, carrion, migratory, then by the continents they belong, Further classification by the family. To these 10 cards you could make 10 associative cards. Of which 5 would be continents – their names, location, mountains, rivers, some countries. One card could talk about migration, kinds, when, where. One card could talk about webbed feet being similar to paddles of boats, with drawings to show the similarity. One card could show wings and how they are shaped to enable flight to explain why ostrich don't fly. Card nine could be food of each of the birds. And card ten could be a bird in your neighbourhood.

To talk about continents is to move to map work. Buy a large wall map of the world for your child. Then choose any 5 countries that are as far from each other as possible. Lets say, Canada, Brazil, Norway, India and Australia.

Day 1: Show and call out the countries simultaneously as often as you can, [at least 5 times]

Day 2: Show him the same countries as often as you can; but this time add Mexico, Chile, England, the Sudan and Japan.

Day 3: Revise the 10 countries three times and add 5: West Indies, Portugal, Russia, Thailand, Mongolia.

Day 4: Revise the 15 countries three times and add 5: Peru, Iceland, Egypt, China, Sri Lanka.

Day 5 and 6: Go through the 20 countries and ensure that your child knows them perfectly.

Day 7: Quick recall of the 20 and add 5.

Go through the same motions as the first exercise. It works. We have worked with quite a few children and each time it has worked. For your child, the map is like a large jigsaw and you are helping him solve it. He will adore you for it. And what sight is more enthralling than have your child look at you with joy and expectation?

The above articles were contributed by Anugriha. For more information, you could email the author at info@learningnet-india.org. You can also email asha-learning@yahoogroups.com for more of their articles.

Addressing Caste Issues in Curriculum

Caste system is the system of social stratification based on birth. The ascribed status dominates life and aspirations of traditionally marginalised groups in our society - 'closing-in', stifling possibilities of any social movement. But since Independence, the structure of Constitutional Democracy has opened-up avenues making it possible to move-up the socio-economic ladder. In this context, formal education has a strategic place. At the same time we know, from much

glorified and less debated Puranic examples of Karna, Eklavya and Shambuka that the system of caste also can have overbearing control on formal education. Through the fifty years of constitutional rule and the so called harsh, partisan measures of Reservations in education and employment the picture has only partially changed. See *Boxes*

The Figures Speak For Themselves

- According to the 1991 census, 77 percent of the Dalit workforce is in the primary (agricultural) sector of the economy. Most of them are landless laborers.
- An estimated 400 lakh people in India, among them 150 lakh children, are bonded labourers, working in slave-like conditions in order to pay off a debt. A majority of them are Dalits. 66 per cent of bonded labourers are Dalits.
- According to government statistics, an estimated ten lakh Dalits are manual scavengers who clear human excreta from public and private latrines and dispose of dead animals; unofficial estimates are much higher.
- A recent survey in Marathwada revealed that 50% of rural Dalits do not have access to drinking water facilities, in 85% of the villages, entry was not allowed to Dalits into upper caste houses, 80 % prohibited Dalits from entering temples and in most villages Dalits were forced to act as scavengers.

Have reservations really helped dalits?

- Literacy rates
- Total literacy : 52.21 %
- Dalits : 37.41 %
- Literacy among men : 64.13 %
- Literacy among Dalit men : 49.91 %
- Literacy among women : 39.29 %
- Literacy among Dalit women : 23.76 %

It is therefore necessary to strengthen the mechanisms of formal education which open-up opportunities and give voice to the oppressed classes, castes, gender, tribes.

What is it like to be a dalit child in school today?

What does it really mean to be a dalit child in school today? Is social opposition to dalit schooling an aberration of the past? In the absence of systematic research we do not have definite answers to these questions. Still, available studies provide clear evidence that schooling can be quite a traumatic experience for a dalit child.

School textbooks are, by and large, silent about the dalit experience of social oppression. A study of textbooks for classes 4,5 and 6 of government schools in Madhya Pradesh, for example, shows that not a single character can be identified as coming from a scheduled-caste background. Yet a large proportion of students in these schools are from erstwhile untouchable communities.

Dalit students, however, find the silence about dalit experience in the official school curriculum less threatening than the power of the 'hidden' curriculum of norms, values, attitudes and expectations. Some dalit students who went to school just three decades ago quoted several examples of blatant discrimination, including being made to sit or eat separately. Eighty per cent of the 1,030 dalit students at a college in Aurangabad, (Maharashtra) said they were made to sit outside the classroom in primary school. In another study, a Harijan schoolteacher from Azamgarh (U.P.) painfully recalls his school days: 'We were asked to sit separately. Our copy or slates were not touched by the teachers'.

There are still other forms of discrimination which are less tangible but equally damaging. Teacher behaviour is one important source of humiliation. Upper-caste teachers have low expectations of

dalit pupils and often consider them as 'dull' and 'uneducable'. A significant proportion of scheduled-caste professionals recall being made to feel 'unintelligent' and 'inferior' by their teachers, and also feeling 'ignored' by them. Interpersonal relationships among students are also a problem. An ICSSR study conducted in the seventies concludes that 'at least as far as Scheduled Castes are concerned, schools and college have not functioned effectively as melting pots for caste boundaries in the matter of friendships'.

The adverse learning environment experienced by scheduled-caste pupils cannot but affect their educational aspirations and achievements. The high drop-out rate among scheduled-caste students has to be read in this light. - *Geetha Nambissan, From: Public Report On Basic Education In India (PROBE), October 1998*

Are the cities better than the villages?

The problem is not confined to rural areas and it is disturbing to find that caste prejudices die hard even in a 'modern' setting. A recent study highlights continuing caste discrimination in the heart of Delhi, where some teachers go so far as to criticize the accessibility of government schools to dalit children. As one of them bluntly put it: 'Scheduled-caste bacchon ko padha ke kya faida hai, unko band baja sikha do... bas utna hi thik hai'. (What is the point of teaching scheduled-caste children? Let them learn how to beat drums, that's good enough.)' - *PROBE 1998*

Can my child hope for a future better than mine?

'The teachers only teach upper-caste children. They use our children to do odd jobs in the school. They don't teach them anything. 'Padhai sabke liye barabar honi chahiye' (all pupils should be taught equally) - Ramsree, a Jatav mother in Surothi (Dholpur, Rajasthan). - *PROBE 1998*

It is not only enough to strengthen mechanisms of ensuring entry of oppressed in education system. It is also equally vital to have fair, representation of oppressed castes and their life experiences in educational texts.

Are our text books fair?

A study of Marathi medium textbooks under progress by Avehi-Abacus Project reveals that even in a Marathi language text-books; a language, which is replete with rich Dalit literature especially since past 40 years or so, the representation of Dalits is merely about 12%. Dalit characters are not only far and few but even those which find space in the pages of the text-books feature as a poor, ignorant people; who need to be 'elevated' and endowed with (our) 'culture'.

Study of Marathi Medium Textbooks (Std. I to V) by Mr. Prakash Burte supported by Eklavya, M.P. and published by Avehi-Abacus Project also shows absence of any reference of the existence of caste system and thereby the recognition and analysis of plight of the lower castes. Moreover, there is a clear bias in favour of fair as against dark complexion. This is especially disturbing oversight on part of the text-book bureau in a place where caste and racial characteristics are synonymously used.

Our Experiences While Using The Sessions On Caste

When the Avehi Abacus Curriculum was used in 25 Mumbai Municipal Corporation schools we were worried that teachers will vehemently resist talking about caste. The resistance did come from a small section and was not too aggressive. Common grounds could be negotiated. Since we used an already existing story of respected writer like Premchand it was not perceived as exaggerations, interpretations, biases on our part. Most children were thrilled with the sessions. These are some of the sessions they may never forget. Feed-back from children, revealed ...

(Although the sessions on caste were done in Std. VI these are some of the sessions they remembered. Just 2 of children's Comments are fluidly translated below:)

"We are studying 'Avehi' curriculum from class III. Avehi has given knowledge to us more than our 'studies'. We learnt that there should be not caste inequalities. So I like Avehi a lot". - *Mahendra*

Jaitafer, 7th Sd. Kawlemath Marathi School, Bombay 19.....

“ We get so much ‘other’ knowledge. We learnt that one should not have ‘us’ and ‘other’ feeling (‘Bhed - Bhav’- that one should not discriminate). We learnt that caste discrimination was very bad and actually happens even today. We now know that one should not fight with others. In Avehi they teach us so many other things. What happens in society we know because of Avehi.” - *Sharmila Ghosalkar, 7th Std. Kavlemath Banganga School 1996.*

In the end, we feel that being able create a ‘space’ to negotiate and discuss such pertinent ‘controversial’ issues in the ‘legitimate’ school atmosphere itself was an extremely empowering exercise for us, our children and teachers.

The above article was contributed by Avehi Abacus. More information on Avehi can be obtained from their web site www.avehi.org.

Educational Endeavours In Auroville Tamil Schools And Their Relevance To Indian Mainstream Schools - Subash And Lourdes

Introduction

India will be the Guru of the world – so said Swami Vivekananda and Sri Aurobindo in the early decades of the 20th century. That was the time when India was totally subjugated to the British and nobody could dare to think of India’s superiority in any field. Even after 40 years of Independence, many Indians continued to think of India in inferior terms. That situation has changed and now India is emerging as a knowledge power. Still a large proportion of the population, more than 50% of it, remains illiterate. Even though enrollment in the schools is becoming larger and larger every year, the education got by them, particularly by the rural students, is qualitatively very inadequate. If it continues like this, only the elite, composed mainly of urban populace, will hold the reins of the knowledge power and reap the benefits. The gap between this elite and the larger populace will become immense and may become very difficult to bridge. This article suggests ways to avert such an outcome by providing quality education to all levels of students.

Educational scenario in the country

Remnants of the British educational system, totally irrelevant to the emergence of the genius of Indian nation, still hold the Indian education in its vice-like grip. As a result Indian educational system still remains teacher-centered and syllabus and examination oriented. It follows this route. THE EDUCATIONIST decides what a student should have acquired by way of learning, from the preschool to higher secondary level. A curriculum to fit this decision is designed for each level and texts are prepared in bits to accord with this curriculum. Textbooks with certain number of lessons in each textbook follow. THE ADMINISTRATOR decides on a time frame for the teacher to teach all the lessons. A timetable is drawn according to which THE TEACHER TEACHES the lessons. Training, whether it is in the formal or non-formal or play way or joyous learning methods, is given to the teacher FOR TEACHING EACH LESSON. Examinations are conducted BASED ON THESE TEXT BOOK LESSONS and marks or grades given for the right answers become the basis for assessing the learning of the student. The entire educational administrative setup, from top to bottom, is geared towards this end. In this process somewhere, perhaps from the beginning, the learner’s real learning gets lost. Eagerness and enthusiasm to learn new things, with which the student enters the school, disappear. The student, around whom the entire learning/teaching process should be centered, becomes just a unit in this monolithic structure and his/her real learning needs are never taken into consideration. By the time the student completes his/her formal education, he/she is drained of all the freshness and curiosity with which he/she started his/her education. Deprived of such precious things, he/she enters the mainstream of national life. Naturally his/her contribution to the nation is not of much significance.

The Need Of The Hour

This condition should be reversed. A fundamental shift in the approach to the learning process should occur. The learner is a living and growing human being. He/she is unique, that is, he/she has a will, temperament, way of development, of his/her own. Hence the education of the student should start from where he/she is; he/she should be consulted in his/her learning and the procedures should be adopted with his consent; in that process his/her innate knowledge and potentials should be brought out and allowed statement. In short, the education system should become learner-centered. The role of the teacher should be that of a facilitator in such a learning process. Learning should be given more importance than teaching. The teacher should be somewhat like the Guru of the ancient time, who sees the student in his/her totality and accordingly imparts education. The curriculum, the classroom environment, classroom management, the learning materials and method, review of the learning, organizing the learning time, administration, all these should have the student and his/her learning level as their focus. Creation of such an educational environment is the need of the hour.

Worthwhile Innovative Educational Endeavours In This Direction

In the last 15 years many innovative experiments in education at all levels have been conducted in India. Ekalavya experiment in Madhya Pradesh, Rishi Valley experiment in Andhra Pradesh, experiments in the schools run by institutions connected with Sri Aurobindo Ashram of Pondicherry, experiments in Auroville, a city being based and created on the spiritual principles of Sri Aurobindo and Mother etc. are some examples which have produced successful outcomes. The results of these experiments show that it is possible to fulfill the need of this hour in its entirety. Many of the successful experiments have been institutionalized by converting them into appropriate methods and using them in educational institutions. Some of them are here described briefly.

Glenn Doman method: This method enables a child to learn a large number of things in a short time. Glenn Doman, an American, who conducted researches with brain-injured children so as to make them normal, discovered it. He succeeded in finding effective ways and made them normal. When he applied those methods to normal children he got stunning results: 5 years old children were able to read like an adult, to learn several languages, to recognize the notes of classical music, to distinguish between the paintings of great artists, to perform fantastic gymnastic feats. He continued this research with the normal children and discovered the right methods. His method is simple and can be considered as a systemized use of flash cards. Even though his methods are designed in such a way that the parents of the children alone can undertake it, it can be used in a classroom context. In 1994, a dedicated young Tamil couple, Mr. Raghavan and Mrs. Aruna Raghavan, opened a primary school in Arasavanangkadu, which is an economically backward village in Tiruvarur district of Tamil Nadu. They successfully introduced some modifications in this method to enable a class teacher to impart reading skills to a maximum of 5 children at a time. The age of the children varied from 42 months to 54 months. A language session, whether it is Tamil or English, needed a maximum of only 15 minutes a day. In the course of 2 years these children learnt to read fluently in Tamil and English. Using the same method, the children learnt a lot of general knowledge which a 4th or 5th standard student normally learns.

Rishi valley method: Learning the subject fully at one's own pace and acquiring a capacity for self-learning are the hallmarks of this method. Rishi Valley is a backward area situated in Madanapally district of Andhra Pradesh and mountains surround it. The famous sage, J. Krishnamurthy, founded the main school there. Sixteen satellite schools are functioning there which are run by the Rishi Valley Rural Educational Center, and they cater to the primary educational needs of the village children in that area. In these schools a very effective and innovative system is used since 1995. Each of these schools has one teacher and 30 to 40 children, and has one multi grade multi level classroom, that is, all the 5 grades are in one classroom. The children learn 4 subjects, their mother tongue, Maths, Environmental Science and English. Some 500 cards for each of the first three subjects are prepared and stacked in a graded manner. The children study the cards one by one and learn the subject matter by themselves. A ladder system is used by the children to identify themselves the cards, which they should study next. Joyous learning as well as group

activities is in-built in these study cards. The students there are fully absorbed in their studies.

Audio-tape method combined with language games: Lourdes and Roy of New Creation School, Auroville, learnt this method from Jeff from Greece. In Greece, Jeff used this method to teach English to Greek students. Lourdes improvised upon this method combining language games with it thereby making it joyous and interesting. In this method, a short story is prepared in English. An audio version is made on a tape by reading the English sentences one by one and accompanying each sentence with its Tamil rendering. Children are given the English text and they listen to the text on the tape even while reading it. Some 10 to 15 language games are used to learn the English words and sentences in it. Further, through these games, the children learn to use the language skills they have acquired. In 10 to 15 hours children learn a good amount of English vocabulary and also acquire the ability to use them.

The phonics method: In this method children are taught to learn to read by using the phonic sounds and their corresponding letters. Some 43+ basic phonic sounds are taught with the letters mainly used to represent those sounds. Then they are given auditory training through which they learn to blend those sounds and letters to form words. Afterwards frequently used irregular words that do not correspond to this formula are taught to them. Then they are taught spelling for learning writing. Then only the names of the alphabet are taught whereby the children learn to use the dictionary. All this enables the children to learn to read any English text by themselves.

Thematic project work method: The student does project works on a particular theme and in that process learns the subject matter. In this method, he/she does not learn each lesson separately. The subject matter is learnt in a comprehensive, holistic manner. For instance, a thematic project work on air or water links science, geography, maths, language, literature, and the subject content is learnt in a context and hence comprehensively. This learning involves group activities, critical and creative thinking skills, organizing skills, cooperation and coordination etc. At the end of the Project Work the students display or demonstrate what they have learnt in front of an invited audience. This method is increasingly used in the elite schools in India.

Education by design method: This method is an improvised method of the Thematic Project Work and was discovered and improved by Antioch University in U.S.A. Here the curriculum content is converted into a problem or challenge to be tackled, which is given to the students. Only after learning the relevant subject matter well can the students solve the problem. Students are formed into groups and each group takes necessary efforts and solves the problem. This method gets the students absorbed in their learning and equips them with all the skills necessary to lead an eventful life. Further this method brings out their innate talents and potentials in an ample measure.

Basic sentence structure method: This method was designed from the actual experience of Thiru Karmayogi when he was a teacher in a school. An S.S.L.C. student from a village, who could not memorize anything in English, never got pass marks in it. He had to pass his selection examination to appear for the final examination. He had to prepare for this selection examination in 45 days. He made a Herculean effort, from 4 in the morning till 11 in the night, to learn to write faultlessly by using some 10 basic sentence structures. In these 45 days he learnt to write English sentences on his own, wrote the examination and came out first in the class, which nobody, including himself, did expect. This method consists of learning a certain number of basic English sentence structures and acquiring proficiency to use those structures. Afterwards the essential aspects of grammar associated with those structures are learnt. This enables the learner to use those structures for whatever he wants to express in English.

Ciefl method: CIEFL stands for Central Institute for English and Foreign Languages, Hyderabad. This institute has designed an intensive course to acquire a very good proficiency in English in 400 hours. This course consists of 5 books with 10 units in each book. In each unit some 12 aspects of English language learning are taken care of. To supplement this, a set of 500 brilliantly arranged reading cards is used. The subject content of the cards is written in increasing

complexity and the texts cover a wide range of interesting topics.

Spiritual methods: Real knowledge is knowledge through identity with the object of knowledge, the Divine being the supreme object of knowledge. Meditation, concentration, consecration, and prayer are some examples of the spiritual methods used to achieve this aim. In ancient times not only were the Divine sought after but also knowledge of the world. Astronomy and herbal medicines were some examples of the knowledge got by the sages through identification with the corresponding objects. Mother of Sri Aurobindo Ashram knew the psychological properties of flowers by identifying her consciousness with their consciousness. During the practice of spiritual methods the mind falls silent and knowledge is received by the silent mind. The students can learn to make their mind silent and receive solutions to their learning problems and difficulties. Through prayer the student can observe his/her learning difficulties disappear. Through consecration the student can learn to abide by the dictates of his/her inner divinity and in that process intuitive faculties can emerge. Deeper values will become internalized in a spontaneous manner.

Relevance Of These Endeavours To The Mainstream Schools

The Glenn Doman method: Through the Glenn Doman method, children can learn to read well at a very early age, which will make their learning at the primary and secondary levels not only faster but also more complete. Children have inexhaustible thirst for learning and to quench it what better instrument can there be than proficiency in reading? Why should it not be acquired at the earliest possible age if it can be done with the willing, joyous involvement of the child?

Rishi valley method: In Rishi Valley Method, children in the same class, who are at different levels of learning, learn their subject matter fully well and acquire the capacity for self-learning. Further they learn joyously and help each other in this process. There is plenty of flexibility in the preparation of their study cards because, according to the learning level and need of the child, subject content can be decided and the study card designed and prepared. Text material can be easily prepared in accord with the local context of the children. Further, in the organization of the Environmental Science class the use of the cards is such that a lot of discussion and eliciting of conclusions or solutions from the data by the children themselves occur. They interact freely with each other as well as the teacher. review of the learning of the children is an ongoing one and the teacher on the basis of this assessment plans classroom activities, group or remedial. There is a lot of scope in this method to involve the community in the children's learning process. All the aspects of this system work together and remove more or less all the learning difficulties, which the primary school children normally encounter. A tenth standard level student can be trained as a teacher in such a classroom. This system has been adopted successfully in all the government primary schools in Mysore district of Karnataka from this academic year and is in use in states like Uttar Pradesh, Kerala, Gujarat and Madhya Pradesh.

Audio-tape method combined with language games: The present level of English language proficiency of Indian students, even at the collegiate level is very poor; in the case of rural students a sheer dread is felt by the very phrase English learning. This method not only removes the dread totally but also imparts confidence, joy and enthusiasm in learning English. Further it takes care of all the four skills – listening, reading, speaking, and writing – in language learning. Language games facilitate the learning of new words, use of those words, and sentence making on one's own to say or write what one wants to. Using this method a first-generation school-going student can easily and joyously learn English sufficiently well. Also a student can learn any second language through this method. In India, where more than 15 distinct regional languages are spoken, this method can make it easier for any student to learn any other Indian language other than his mother tongue. Experiments of this method in Government Panchayat schools by the staff of New Creation and Isai Ambalam Schools have produced very rewarding results giving assurance that this method can be used effectively even in a class of 45 children.

The phonic sounds method: If one of the reasons for the dread felt by rural students towards learning English is mentioned, it will appear innocuous: they do not know even the physical

process of reading an English text ! That is, even though they learn all the 26 alphabets of English, no serious thought is given for teaching them how to read by combining these alphabets to form words. Unless a student reads a large amount of words in English, he/she will find every new word a challenge. Unlike the urban students, rural students are not much exposed to reading in English. Hence the difficulty extends till the end of his life making him a practical illiterate with respect to English. This method makes the process of learning to read any English text on one's own much easier.

Thematic project works method: In Thematic Project Works Method, the students are not confined to one bit of lesson at a time. Instead they learn any subject as a part of a particular theme. They form themselves into groups and plan and organize their work. They gather information pertaining to the theme by doing activities, by reading books and by interviews and then discuss and process the information. The teacher provides them access to the resources like books and materials, arranges for field trips, group activities and brainstorming sessions etc., clarifies doubts, monitors the working of the project and guides them in completing the project. As the students do not merely learn a lesson, but learn a theme in its totality, the learning sustains the curiosity of the student continuously. This method has been extensively used in all the schools in Auroville as well as the schools related to Sri Aurobindo Ashram of Pondicherry. In Andhra Pradesh, Ms. Ratna Reddy, a woman MBA graduate, is running very successfully a higher secondary school. The learning in all the classes of this school occurs by doing project works on a theme. The entire school takes up one single theme for a month and all the learning activities are organized around that theme. The entire staff, – teachers, librarian, lab assistants and administrative staff, – work in coordination. The school has been producing excellent results for the last 8 years. How well equipped such an Indian student would be when he/she enters the mainstream of national life?

Education by design method: In Education By Design Method a student acquires much more – he/she acquires problem-solving skills in an abundant measure. Further this method brings out the innate talents and potentials of the student and enables him/her to be creative and resourceful. Unknown things do not threaten the students any more. He/she becomes ready to face it. Instead of submitting to things happening to him/her, he/she becomes proactive and makes things happen. Does not India need such men and women in the coming years?

Basic sentence structure method and ciefl method: Both these methods are also learner-centered in that they start from where the student is. That is, the student can continue learning English from the proficiency level attained by him/her till then and achieve a very good proficiency. Levels of proficiency attained by lakhs and lakhs of Indian students vary very widely. Many of them want to improve their English skills but are not able to do so because they do not know how to proceed with it. These methods give them effective scope to continue with their efforts from the level attained by them and complete the process of attaining real proficiency in English.

Need For Integrating Such Endeavours

The sum and substance of all these methods are that they are all learner-centered, learning is joyous and interesting, the learners are fully involved in their learning, the capacity of self-learning is fostered in the learner and, above all, they work. But, so far, all such methods have been discovered in particular contexts and are used in an isolated fashion. Even though some efforts to integrate them in a limited context have been made, a concerted effort to incorporate many such endeavors in an integrated manner for the all-round development of the child has not yet been fully attempted. At the primary level Rishi Valley Method has achieved a very remarkable integration. It has incorporated in its language and mathematics study cards several joyous learning components of the innovative methods discovered throughout India at the primary level. Its arrangement and use of Environmental Science study cards are nothing but a miniature thematic project work in operation. In Arasavanankadu, Mr. Raghavan and Mrs. Raghavan are trying to achieve it in a much bigger and wide-ranging way, from the crèche to the elementary level. In Isai Ambalam School of Auroville such an effort is initiated and continued till the completion of the secondary level of learning. Such integration needs to be done, in a continuous

manner, from the pre-school to the higher secondary level.

How This Integration Can Be Done

At the preschool level themes like peacock, household animals etc. can be taken up and a project work can be designed. Learning activities appropriate to the level of the children but organized around this theme can be given. For instance, if Glenn Doman method is adopted in the school the flash cards and the books prepared for reading can contain the words associated with this theme. Activities like songs, games, drama, nature walk, field trips, painting and clay work by the children can be taken up in relation to this theme. At the primary level Rishi Valley method can be used. This method has a great potential and a good flexibility in its implementation. In this system the task of assessment has been made simpler and easier and is an ongoing one. If the children show a capacity for fast learning, a tentative learning programme for each such child can be drawn up and followed in a Rishi Valley classroom. Through its environmental science classroom an immense range of interesting and new topics can be offered to the child. Through Audio-Tape method its children can start learning English and any other second language. Through Phonic Sounds Method the student can learn to read any English word. At the secondary level, through a combination of Audio-Tape Method, Thematic Project Work and Education By Design Methods, the students can learn most of their subjects by themselves. Some aspects of Basic Sentence Structure method can be incorporated into the Audio-Tape Method whereby the student can learn to use many sentence structures in English. The task of his/her own English sentence construction can be facilitated to a great extent. At the higher secondary level the subject can be learnt through Thematic Project Work Method as well as Education By Design Method. A student, who has already gone through such a learning process till the end of secondary level, would have acquired a very good capacity for self-learning. He/she could plan and organize their studies in a relevant manner and implement the plan. Rishi Valley Method has solved the problem of a large number of students at different levels of learning levels under one teacher getting a qualitative education. Its experience shows that a class can contain a maximum of 30 to 40 such children. The experience of Lourdes, a teacher in New Creation School of Auroville, in a village called Therkkunam near Kiliyanoor, has indicated that the Audio-Tape Method can be used effectively in a class of 45 children belonging to 6th standard. There he had formed groups of 5 children with a group leader for each group and all the students in each group had learnt a considerable amount of English. The experience of Ms. Ratna Reddy in her CHIREC Public School proves that it is possible to organize the learning in the entire school by using Thematic Project Work. These results show that self-learning, peer help and group activities under a group leader, all these facilitated by the teacher; hold the key to an effective integration of such endeavours inside the classroom. Freedom as well as training to the teacher for organising the learning activities in a classroom according to the learning level and need of the student and the administration necessary for this are the effective supports for this integration.

Creation Of Model Educational Institutions

A strong felt need for a rapid improvement in the quality of education exists in the country. The methods necessary to fulfill this need are also available. Many people, – teachers, parents, administrators, even the students, – feel that education should not be pursued in the present way and that it should be different. Still, the objective of quality education is not attained. Because the present education system, which is old by more than a century, has created a certain strong rigidity in its functioning making the adaptation necessary in the new conditions very difficult. For this rigidity to go and the needed changes to be brought about, the parents, the community, the administrators, the teachers, in fact, the entire populace should come together and take up the necessary action. Creation of model schools throughout India, that achieve the qualitative results by using in an integrated manner the methods described above, will go a long way in creating such a situation. Planning and creating model plots of land cultivating hybrid varieties throughout India enabled the Indian farmers, who were always averse to change any of their traditional practices, took to the use of hybrid wheat and rice varieties and this resulted in the Green Revolution. Model milk cooperatives throughout Gujarat led to the White Revolution. By creating model schools a similar thing can be done in education also although the process will be in a different dimension. In the model school an individual folder for each student can be created and

maintained throughout his/her schooling period. It can contain the student's learning output as expressed in creative works like writing, drawing etc., and the assessment, by self, others and teacher, of his/her learning as expressed in project works. The teacher can use this folder, to assess the learning level attained, to keep track of his/her progress and to arrange for learning activities for him/her. Learning/teaching programme in the classroom can be according to the learning level and need of the students. Teacher can be given necessary freedom to organize and facilitate such learning. Time table can be flexible and the teacher can be allowed the needed discretion in handling it. A well-equipped library containing resource books and other materials appropriate to the learning level of the students can be made available and easily accessible to the students and the teachers. Administrators can arrange for the in-service training needed by the teacher to function thus. Parents and community can be involved in this process through parents-teachers associations. In the initial phase of the spread of quality education, only in the model schools will it be easier to make a concerted effort at an integrated use of the appropriate methods and to achieve quality education for all students than to try it straightaway in all the schools. Once the objective is achieved in the model schools a clear experience of the things standing in the way of quality education and the process of their removal will be got. Only then whatever academic, administrative and other facilities were provided to these schools to facilitate the achievement can be made available for other schools striving towards the quality objective.

Conclusion

The sages and saints of India till the end of 19th century had considered education as that by which the person prepares himself/herself to enter the spiritual life to reach the Divine. But Sri Aurobindo and Mother have given a new objective and process to education. For them not only the attainment of the Divine but also His manifestation is important. The instruments through which these are to be attained are the psychic, the mental, the vital and the physical parts of a human being. Their educational objective was to discover the psychic, bring it to the front and make it active and to prepare the mental, vital and physical parts to receive and manifest the Divine. The solutions for the present crises facing the world and the actual solutions can become possible only from a spiritual perspective. India cannot only provide that perspective but also can give a lead in following it. The process of attaining the quality education through the integration of the methods mentioned above will enable the student to acquire this perspective and the necessary faculties to base his/her actions on it. For, these methods make it possible for them to grow in freedom and joy and without losing his/her uniqueness and freshness.

The above article is from Auroville.

Introduction to TNSF

The People's Science Movement

Movements are about ideas - ideas that shape society and change the way we live and think. Our freedom struggle showed us how colonial rule was making us dependent and weak. It showed us the strength we had within us to free ourselves. Democratic, Socialist and Women's movements have also changed the way we think and live. Building on this heritage, the Science Movement, adds a new dimension to these progressive ideas - a critical understanding of science. The 20th century has made the role of science and technology central to how society works. Not just in production, economics and war, but also in shaping public opinion, in defining culture, in politics, in music, in government, today science plays a major role. Though it is easy to see how science impacts society, it is harder to see how society impacts science. How does society decide what a Newton sitting under an apple tree is thinking? It is easy to see how vested interests influence politics and economics. It is harder to see this in science. Even in Newton's time, prevalent social ideas influenced the way science was done. This is much more true today, when science is no longer an individual pursuit. Science is a social effort funded and directed by governments. Why does Nuclear Research get more attention than Solar Energy? Who decides that the science of weapons needs more money than the science of agriculture? Why should government subsidize research that benefits only the rich? Why must we pour money into big dams instead of on local

water harvesting efforts? These are questions of social choice and they decide what science is done. We have a say in what science is done !Long ago, it was felt that ordinary people needn't worry about government and politics - it was best left to kings. Today it is felt that science policy and research is best left to governments and scientists. Science affects all of us. Ordinary people should have an informed say in deciding what science is being done, how and why. This is the first agenda of the Science Movement - analyzing policies, educating people and mobilizing public opinion on issues.

We do more than just critique state policy. We also develop alternate models in literacy, education, health, enterprises and agriculture. Through these models we attempt to restructure science and technology so that even the poorest can use science - so that people depend less on specialists who exploit. Training teachers to use innovative teaching methods, training village women to use health information, training farmers to experiment and use science to improve soil - this then is the second agenda of the Science Movement. These programmes mobilize the poorest and put into practice the promise of science - improving living conditions of people. Creating a Scientific Culture.

Thinking critically about science policy, using science in our daily lives and not getting fooled by superstitions - this requires a rational society. Explaining natural phenomena using science, countering harmful irrational beliefs and increased scientific awareness one hopes will lead to a more rational society. Creating a scientific culture is the third agenda of the Science Movement.

Thinking Globally and Acting Locally

Our strength lies in our ability to campaign on larger policy issues while at the same time demonstrating how these ideas actually improve the lives of the poor. Our strength lies in our volunteers - working people who spend their spare time helping in schools, visiting villages, organizing programmes, training and raising funds. A democratic structure ensures a participatory organization - volunteers see that they have a say in how things are done and therefore become more committed.

From the pages of our history

TNSF was started by a group of scientists from IIT and IISc in 1980. By 1987, we were critiquing science policy, organizing science lectures, bringing out a Tamil children's science magazine, working with teachers on science education, doing slide shows in villages and publishing popular science books. Our members were scientists, insurance and bank employees and teachers from cities and towns.

Then the science movement discovered street theatre (Jatha) as a tool for social mobilization, and all over the country we organized village Jathas on a number of social issues - water, health, literacy, education, employment and gender. The response - tremendous! But when people came to us expecting solutions, we had very little to offer! We knew how chemicals destroy soil fertility - but we didn't know how to actually create a viable alternative! It was now time for us develop and demonstrate alternatives.

From talking literacy to actually doing literacy...

We developed the mass literacy campaigns, coined the word Arivoli and pushed the government into adopting this as the strategy for literacy. 1989-95 -TNSF was synonymous with literacy. In 8 districts we mobilized and trained people and organized literacy classes. In each district we reached 2000villages, mobilized 20,000 teachers and 200,000 learners. Most volunteers and learners were women. In anti-arrack agitations, learn-cycle campaigns, employment programmes and credit networks, women participated in large numbers. The local vested interests (arrack shops, money lenders, quarry contractors) and even the government felt threatened. The Govt-TNSF partnership soured and we pulled out of the literacy campaigns.

"After literacy, what ?"

There were no easy answers - each district tried its own experiments. Kanyakumari and

Virudunagar built self-reliant women's networks around savings and credit. These networks now have 40000 women who have together saved Rs. 2 Crores! Ramnad and Vellore started a health programme – training village volunteers to provide individual advice on children and women's health needs. Madurai experimented with enterprises for women, Pudukottai with quarry contracts for women's groups, Villupuram and Cuddalore with school drop-outs, Vellore with an activity based school and Ramnad with a support shelter for women victims of violence. Lots of experiments – some worked, many failed. Just like life evolved, ideas that worked began to spread.

And this bring us to the present..

We are now integrating and expanding the ideas that have worked. Self-reliant women's savings groups, community health programmes, libraries for women, rural IT centers, innovative teaching methods - are all ideas that we taking to new blocks. These block programmes demonstrate how science can be used by ordinary people, they demonstrate how even the poorest can plan their own development. These efforts also strengthen our ability to fight larger policy issues. Most importantly, these programmes save thousands of children from malnutrition, from dropping out of school, empower lakhs of women with credit and with enterprise and health skills and help farmers improve their soil and their yield. These village programmes require corresponding work at the city -interacting with officials, writing reports, preparing training materials and arranging funds. We need volunteer teams who can work on these. The Friends of TNSF was formed to create a space for this - small but sustained efforts to support a block. Financial support is the easiest way to start, but soon this can expand to an active linkage with the block - visiting and providing other kinds of support.

(taken from a document from TNSF – the complete document can be found at www.ashanet.org/nycnj/projects/tnsf/tnsflntro.pdf)

Making Education a People's Movement

Background

Education in its true sense should extend beyond mere literacy. The focus should be on providing literacy along with the creation of an environment in which the child's innate potential flowers out. Education, apart from increasing the awareness levels should also focus on imparting values, skill and the ability to think independently.

Education gives us a basic understanding of the worlds we all live in, and equips us with tools to expand our ability to improve life. Education is a basic human right, and for many of us education has become an integrated part of life which we take for granted. However nearly a billion people world wide have entered this millennium without being able to read a book or sign their name - much less to use a computer. Quality basic education for every girl, boy, man and woman is not only an essential right, but an achievable goal. Community participation is now increasingly finding place in all spheres of development. Even Governments which are used to doling out programs now understand the role and responsibility of the community in programs which affect their development. For programs to succeed they need to go beyond just the verbal levels and everyone person involved should necessarily be made a stake holder in the process.

The gist of today's talk is not only to understand how education affects Community development but also the role of the community in the provision of schooling. Most of what is spoken today is from the experience gained over the last few years of working with the community in the field of integrated development with special focus on education.

Education and Development

Education is critical to sustainable development. Education creates opportunity. There is a vicious circle between poverty, adult unemployment, illiteracy and child labour, and none can be tackled in isolation. We need to break this cycle now and education is definitely the key.

This society's social and economic debt is connected. Our challenge is to find the resources to invest in our children and our communities to ensure opportunities for children and to strive for equal educational benefit. This investment is worth the effort. It has been estimated that one rupee spent on child promotion and prevention is worth more than six rupees in interventions or solving social problems

Apart from Education being a universal human right, it can be considered as the key to poverty alleviation and sustainable human development. No matter how many policies are formulated to reduce poverty, achieve the Millennium Development Goals, sustain the planet and create a better tomorrow; all of them will ultimately fail unless governments and non governmental organizations enact bold new measures to get children back into school today. Failure to end the global crisis in education makes sustainable development impossible by denying nearly a billion people the ability to make informed choices about their lives, their families and their societies.

Discrimination can also take a more subtle but equally damaging form when the education system is based on a rigid formal school paradigm with no room for flexibility or innovation to accommodate diverse cultural or physical needs. Globally, there are more and more well educated people, able to do more and more sophisticated things, and at the same time there are more and more uneducated and ignorant people. This polarizing trend has a tremendous impact on social, political and cultural life on the planet. Saying that education is a key to development, we could likewise say that ignorance and the lack of education is a threat to development.

What is the stake for Communities to get involved in the education process?

The all encompassing role of education in development can no longer be denied and much is at stake. Education can no longer be viewed from the point of mere schooling alone but needs to be seen from the development perspective. The influence of education in the development process and its impacts has over the years been well documented all over the world. Some of them are:

The essential role of education in poverty eradication

Poverty eradication depends on education - particularly the education of girls and women. It is not only an end in itself but also an enabler for other policies that help to reduce poverty.

Access to services and resources

Without the ability to read, many people are unable to take advantage of public services because they are unable to understand any published information about how to obtain and qualify for these services (such as health, housing, credit, legal, or agricultural services). Furthermore, education places poor women and men in a better position to demand access to services and resources. The greater self-confidence and sense of entitlement or worth that educated people carry with them often makes them more willing to request services and use the resources that are offered to them. One example is that women who have attended school are more likely to register for government health services than those with no education.

Participation and democracy

Educated men, women and youth are better able to participate in the decision-making processes that affect their lives. Democracy depends upon an educated population that is able to express their needs and desires and to be heard. Wider, better-informed participation in the political process is a catalyst for change. Educated people demand greater accountability from the decision makers. They are better able to follow the decision making process, be it through media or personal observation, and to demand explanations for the decisions that are made. As a result, education supports good governance, which is a key in deciding the course for sustainable development. Education is especially important to enable women and girls to have a larger say in decisions at all levels, from the household to the nation. Educated women are more likely to become leaders and decision-makers.

People who have obtained even the most basic education are more capable of protecting their

interests in a resource or in development that affects their interests. They have an increased capability to participate at all levels of the development process with greater knowledge and confidence. They have a greater ability to initiate development plans and coordinate their efforts than other interested parties.

Education is usually necessary for people to be able to use the legal process and the courts effectively to defend their interests, for example to secure their traditional land rights and land tenure. Literate people can also read and understand contracts. No longer will their resources be taken from them through one-sided contracts they were unable to read and had to sign by a thumbprint.

Reducing inequality

A universal public school system that offers good quality education to all can contribute to greater social equality and will help assure equitable access to resources for all people. Educated people are better able to participate in the economic development of a country and will therefore capture a greater portion of the resources. With greater access to education, the poor will be better able to reap the benefits of development and gain a larger share of the resources. This will have the effect of balancing out many inequalities. Education, particularly genuinely multicultural education that is flexible enough to accommodate the different needs, languages and cultures of minority groups, can reduce the effects of prejudice and racism by promoting tolerance and opening up opportunities for marginalized peoples.

Eradicating child labour

One of the direct effects of free and equal education is it gives children an alternative to work. When children are forced into child labor, they have to give up school in order to achieve short-term economic gain for their family. As a result, they are forced to sacrifice the long-term economic benefits that education offers. They are caught in a vicious cycle of poverty that spans generations. The most effective way to offer the 246 million child labourers in the world the promise of breaking out of the poverty cycle is to offer them a future with education. First, a child that is in school is one less child labouring. Second, a child who is educated is more empowered to make meaningful decisions for his or her future that will lead to an escape from poverty.

Securing livelihoods

Education is necessary for the impoverished, especially women, to access markets in which to sell their goods; and to break out of the low skill - low wage - high vulnerability position that can keep families poor for generations. It can help provide confidence and knowledge that is needed to assure a good bargaining position when selling goods at the market, thus safeguarding their resources from exploitation from those with a stronger bargaining position. Education will also promote effective use of credit markets for development of businesses and agriculture. People will be less susceptible to losing their access to resources to creditors since they will be able to initiate more effective business planning and agricultural development.

Education can lead to greater productivity in agriculture. One of the key elements to economic development and growth is an increase in productivity, and one of the leading causes for an increase in productivity is innovation. Basic education teaches people the fundamental skills needed to develop new, innovative techniques in agriculture and business. Local innovations are needed in order to develop local technological developments for alternative energy resources.

Improving health

Prevention of disease and death is greatly aided by even a basic education. Even after controlling for income and other factors, children born to women with at least a basic education are less likely to die in infancy and less likely to be malnourished. Also, with schooling, women themselves are less likely to die during childbirth and the life expectancy for women is greatly improved.

Sustaining the environment

Education can have a strong influence in attaining sustainable consumption and production. A

change in the consumption and production patterns of individuals requires a transition into new technology, increased efficiency, and increase in environmental awareness.

Education can lead to community empowerment giving communities, who have more of a vested interest in their immediate environment, more ability to participate in the decision making processes for development. Also, an educated population can be more easily trained in environmental monitoring techniques to take account of their situation and share the information with local groups.

Young people are the agents of change and determine the environmental attitudes for future generations. A basic education will give each and every person greater ability to understand their environment, and they will be better able to participate in ecologically sound economic development.

How can communities get involved in their education system? Critical to development is the increased participation of the stakeholders in the development of their resources. The trend towards greater integration and more community involvement signals a basic and profound change in the way that schools are structured and represents an alteration in the balance of power within schools. Education becomes a shared responsibility - shared with parents, and other agencies and providers of service - rather than the sole responsibility of the school system.

The range of options for community involvement in decision-making include:

- an advisory function to community
- a participatory role in design, implementation and evaluation of programs and activities
- community ownership

Greater communication between school and parents Schools could, on both formal and informal levels, spend more time explaining programs and discussing the needs of education to parents. Services would be based on the needs and would reflect community priorities. The school would be at the centre of the community and a facility for lifelong learning. The school would be an equal partner in planning with greater collaboration between government and the community. This shift towards community involvement is perceived by many to represent a change in emphasis - away from merely reacting to problems, toward a focus on prevention and promotion.

What should be the principles of community involvement?

Respond to what people want for their children. If a program is to be successful it must respond to the needs and values of a community as stated by community members. This calls for a bottom up approach, since successful implementation depends upon community wisdom as well as professional expertise and knowledge. This is sometimes difficult for professional service providers, because economically disadvantaged communities often identify immediate and short-term goals and needs which may not be compatible with middle-class values.

See the child in the context of the family and the family in the context of its social network and community environment. Family relationships, social networks and values differ in rural and urban communities as well as among populations with different ethnic and cultural heritages.

Identify and capitalize on the strengths of children, families and communities. All too often, professional service providers take a deficit view of children, families and communities. They see all of the problems but none of the strengths.

Teaching staff are given the time, training and skills to build sustained, trusting relationships with children, families and communities. Many children, families and communities have had previous unsuccessful or unhappy experience with service providers. Only time and some positive experiences will convince them that this program is different.

Provide prevention as well as intervention for children and youth. Unfortunately under the present system, services often don't kick in until children are in critical condition and are damaged almost beyond repair. A better way is to create a system that focuses on prevention. Such a system would be able to monitor the progress and development of all children. It would also create a positive climate in a school and in a community so that problems are less likely to develop in the first place.

Ensure that the needs of the child are given priority over institutional and other concerns.

Involve all stakeholders in decision making. Successful programs empower those who participate in them both as service givers and as stake holders. There are dozens of ways to involve stakeholders ranging from representation on the management board to community meetings to asking for stake holder's opinions when choosing a program.

The school would be the centre of the community and a facility for life-long learning. Although the details would vary from one community to another, schools might be the place where a variety of services are offered to children. Bringing anganwadi and continuing education classes together under one roof would rationalize scarce resources; provide a strong role-model for children. Experience shows that schools that work well with community have improved teacher morale and have higher ratings of teachers by parents. Effective parent and family involvement provides educators with a much needed support system.

Community Ownership

A project that is planned, implemented and delivered by service agencies without consulting the local community will have, at best, limited success. Projects that are initiated at the grass-roots level and/or those that involve local people at every step of planning, implementation and evaluation tend to be more successful.

It has been recognized that there is no single "best" way of getting community ownership. It depends very much on the project and on the people and organizations involved. For example, if a project is initiated by the community, service providers should be careful to maintain an advisory/service role and not to take control. When a project has a management board, community representatives should be on the board. Various methods to get community input can be used ranging from surveys and community meetings to simply asking clients, in a one-to-one situation, what they need. The key is not the specific mechanism used but rather recognition that community ownership is essential and that it may sometimes be necessary to share power in order to make this happen.

What can we do to build a successful community based education program?

1. Distribute information regarding cultural, recreational, academic, health, social, and other resources that serve families within the community.
2. Develop partnerships with local youth and service groups to advance student learning and assist schools and families.
3. Foster student participation in community service.
4. Involve community members in school volunteer programs.
5. Disseminate information to the school community, including those without school-age children, regarding school programs and performance.
6. Collaborate with community agencies to provide family support services and adult learning opportunities, enabling parents to more fully participate in activities that support education.

7. Inform staff members of the resources available in the community and strategies for utilizing those resources.
8. Provide understandable, accessible, and well-publicized processes for influencing decisions, raising issues or concerns, appealing decisions, and resolving problems.
9. Encourage the formation of PTAs or other parent groups to identify and respond to issues of interest to parents.
10. Include parents on all decision-making and advisory committees, and ensure adequate training for such areas as policy, curriculum, budget, school reform initiatives, safety, and personnel.
11. Provide parents with current information regarding school policies, practices, and both student and school performance data.
12. Enable parents to participate as partners when setting school goals, developing or evaluating programs and policies, or responding to performance data.
13. Treat parental concerns with respect and demonstrate genuine interest in developing solutions.
14. Promote parent participation on school block, district, state, and national committees and issues.
15. Provide training for staff and parents on collaborative partnering and shared decision making.
16. Share annual reports of school performance and program information with parents at an open meeting to review current progress and solicit input for future goals.
17. Communicate school procedures for addressing parent concerns including appropriate contact person and the process for defining the problem and developing and implementing solutions. Publicize successful changes in the school or program as a result of parent initiation and involvement.
18. Include a mini-poll of parent opinions in each program newsletter covering a wide range of topics over time. Utilize parent feedback in making school/program decisions.
19. Develop workshops or include parents in ongoing training on relevant topics such as developing parents as advocates, mastering skills for supporting learning, identifying and supporting learning styles, resolving difficulties, and fostering student achievement.
20. Administrative Leadership: Build on a strong and understanding administrative leadership in the school. The Head master plays a pivotal role in making parent and family involvement a reality. Teachers sense the level of priority head masters give to involving parents. The climate in a school is created, to a large extent, by the tone set in the office of administration. If head masters collaborate with parents, teachers will be more likely to follow suit. Sometimes there is a misperception that partnering with parents, particularly in the decision-making process, will diminish the head masters authority. Such an approach need not diminish the head masters authority, but can lead to better decisions in schools. When parent involvement becomes a mutual program goal, and parents, teachers, and head masters work together as a team to develop a plan for reaching the standards, substantial progress results.

21. **Affirming Diversity:** The values, attitudes, manners, and views of all populations represented in the community should be respected and honored. The religious holidays and observances of all groups are to be given consideration in the context of the total program serving parents and families. Parent and family involvement is a wise investment for communities.
22. **Systemic Support:** If parent involvement traditions and habits are to be transformed, there must be adequate support from the education authorities outside the school. Proactive parent involvement policies and practices at the taluk, district, state, and national levels are prerequisite. From SDMCs and district offices to state and national departments of education and national professional associations, principals and educators need to know their leaders are willing to support and encourage them as they seek to implement change. When policy makers and education leaders make parent involvement a priority, their actions and the support systems they provide reflect their commitment.

Sustaining Community action

Communities recognize that creating sustainability is difficult and will require a range of mechanisms and actions to be successful. Another key element of such activities is the fact that community members work together often forming unique partnerships of individuals, community and local governments. Most of these communities feel that only through the combined skills and cooperative effort of every segment of the community can they become truly sustainable, especially given the unique and difficult problems that our communities face.

As such, schools need a great deal of autonomy, head master's roles must be redefined to give parents and teachers a central part in ongoing decision making and evaluation, and school administrators need to build consensus between teachers and community members. Sustaining school reform is difficult, and rural school officials should be fully aware of its implications.

One report states that where primary education is concerned, devolution of powers to the panchayaths has hardly taken place, despite primary education being one of the items, which was to have been transferred to the panchayaths under the 11th schedule of the Constitution. Most state governments have given only 'soft' powers to the panchayaths. When schools and communities work together, both are strengthened in synergistic ways and make gains that outpace what either entity could accomplish on its own.

Integration of services

Though the educational system is fundamentally different from the health, social services and justice systems, it cannot in isolation bring out the desired outcomes. There is hence a strong need and justification to integrate with other development programs. Integration of services to children is not a new idea. For many years developmental organizations have recognized the value of working together for the good of the children and youth they serve. Some of these new ways might occur within existing organizational structures. It would necessitate redefinition of roles and responsibilities and the reallocation of resources. An integrated model of service delivery has the potential for improving the quality of service because the system would be dealing with the whole child rather than with individual aspects of the child. Integration of services and community involvement are often discussed together as two sides of the same coin. In the traditional view of the school, the role of parents and other community members was limited to that of passive observers, teachers of their own children or school volunteers. In more contemporary views of the school, families and community members play a role in decision-making.

Moving toward integration of services represents a major and significant change. Integration means shifting from segregated programs and budgets toward community-based action. The development and well-being of children is the most important consideration not institutional mandates, organizational boundaries or other bureaucratic concerns.

The school is seen as the center of a community where a range of programs, services and

resources can be provided for children and their families. Government should begin now to work toward integration of services. They should develop policies that will move them along the road to achieving that goal. Several practical reasons why integration will benefit children and their families.

1. There is a strong relationship “between the elements of a child’s basic well-being - nutrition, clothing, shelter, health and care - and school achievements.” Effective instruction is almost impossible when children’s basic needs are left unattended.
2. The school reaches all children. It is the one place where every child is available every day. The school is the only organization mandated to require and enforce the daily attendance of all children
3. Schools are usually geographically accessible and familiar to community residents. Even if they have no children at school, residents sometimes come to the school for community meetings or to vote during elections
4. Schools are the primary, and often the only, community institutions seen as positive and neutral. They have had contact over the years with residents of different ages, economic status, ethnic backgrounds and religious denomination
5. Schools have the best system of access and outreach to students and their families

Development issues at the community level necessarily are full of challenges and problems. Many people feel it is better to address such problems through a collaborative approach because such problems are multi-disciplinary, multi-agency, multi-stakeholder in nature. The sustainable community approach—in a collaborative process focused on current and future generations’ needs by integrating social, economic, and health issues—provides a promising opportunity to address such problems.

What needs to be done by the Government?

1. Create an Action Team of Parents, educators, administrators, and others deemed appropriate must be represented and involved in reaching a common understanding and in setting mutual goals to which all are committed.
2. Develop a community Involvement Policy: The policies should contain the following:
 - Opportunities for all parents to become involved in decision-making about how the parent/family involvement programs will be designed, implemented, assessed, and strengthened.
 - Outreach to encourage participation of parents.
 - Regular information for parents about the objectives of educational programs and their child’s participation and progress in those programs.
 - Professional development for teachers and staff to enhance their effectiveness with parents.
 - Linkages with community groups to address community issues.
 - Involvement of parents of children at all ages and grade levels.
 - Opportunities for parents to share in decision making regarding school policies and procedures affecting their children.
3. Secure support for optimal success by involving all key stakeholders (those responsible for implementation, those who will be affected, and those outside the school/program who have influence over the outcome, those who are aware of the plan and willing to lend

support to its success). Financial resources need to be determined and secured. The Government should encourage mobilization of resources for financial support of educational projects at the local level.

4. Provide Professional Development for School Staff: The best models for training are those that provide staff with several opportunities to interact with the issues, work together with community.
5. Evaluate and Revise the Plan regularly.
6. Schools should be required to hold "accountability events" at least once a year.
7. Legislation should be enabling rather than restrictive.

Conclusion

Schools have always had some responsibility for addressing all of children's needs. Today, the emphasis on dealing with all of children's needs is greater than ever before. The shifting economic and social environment has given rise to new problems and the current era of openness makes it possible to face problems that previously went unacknowledged. After we left behind the age of industry and entered into the age of information the value of education has started to grow rapidly. Girls account for the majority of the children out of school. Lack of properly equipped classrooms, relevant books and materials, trained and motivated teachers means that their education is cut short and little is achieved in terms of learning outcomes. Systemic flaws and indifference to the needs of learners, particularly those of the underprivileged and underdeveloped sections of society, have increased the wastage rates and resulted in huge loss in the returns of investments so far made

The responsibility of changing this scenario cannot vest only with the government despite the fact that we are a welfare state. No sustainable change can ever be brought without the empowered involvement of the communities served by these schools. Community partnerships are no longer cliché words but are essential pre-requisites for development and change to occur.

The best partnerships are mutually beneficial and structured to connect individuals, not just institutions or groups. This connection enables the power of community partnerships to be unleashed. Schools where parents are involved in decision making and advocacy have higher levels of student achievement and greater public support. Effective partnerships develop when each partner is respected and empowered to fully participate in the decision-making process. Schools and programs that actively enlist parent participation and input communicate that parents are valued as full partners in the educating of their children.

Parents and educators depend on shared authority in decision-making systems to foster parental trust, public confidence, and mutual support of each other's efforts in helping students succeed. The involvement of parents, as individuals or as representative of others, is crucial in collaborative decision-making processes on issues from curriculum and course selection, to discipline policies and over-all school reform measures.

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The Six-Lesson Schoolteacher

by John Taylor Gatto, New York State Teacher of the Year, 1991

Call me Mr. Gatto, please. Twenty-six years ago, having nothing better to do, I tried my hand at school teaching. My license certifies me as an instructor of English language and literature, but that isn't what I do at all. What I teach is school, and I win awards doing it.

Teaching means many different things, but six lessons are common to school teaching from Harlem to Hollywood. You pay for these lessons in more ways than you can imagine, so you might as well know what they are:

The first lesson I teach is: "Stay in the class where you belong." I don't know who decides that my kids belong there but that's not my business. The children are numbered so that if any get away they can be returned to the right class. Over the years the variety of ways children are numbered has increased dramatically, until it is hard to see the human being under the burden of the numbers each carries. Numbering children is a big and very profitable business, though what the business is designed to accomplish is elusive.

In any case, again, that's not my business. My job is to make the kids like it -- being locked in together, I mean -- or at the minimum, endure it. If things go well, the kids can't imagine themselves anywhere else; they envy and fear the better classes and have contempt for the dumber classes. So the class mostly keeps itself in good marching order. That's the real lesson of any rigged competition like school. You come to know your place.

Nevertheless, in spite of the overall blueprint, I make an effort to urge children to higher levels of test success, promising eventual transfer from the lower-level class as a reward. I insinuate that the day will come when an employer will hire them on the basis of test scores, even though my own experience is that employers are (rightly) indifferent to such things. I never lie outright, but I've come to see that truth and [school]teaching are incompatible.

The lesson of numbered classes is that there is no way out of your class except by magic. Until that happens you must stay where you are put.

The second lesson I teach kids is to turn on and off like a light switch. I demand that they become totally involved in my lessons, jumping up and down in their seats with anticipation, competing vigorously with each other for my favor. But when the bell rings I insist that they drop the work at once and proceed quickly to the next work station. Nothing important is ever finished in my class, nor in any other class I know of.

The lesson of bells is that no work is worth finishing, so why care too deeply about anything? Bells are the secret logic of school time; their argument is inexorable; bells destroy past and future, converting every interval into a sameness, as an abstract map makes every living mountain and river the same even though they are not. Bells inoculate each undertaking with indifference.

The third lesson I teach you is to surrender your will to a predestined chain of command. Rights may be granted or withheld, by authority, without appeal. As a schoolteacher I intervene in many personal decisions, issuing a Pass for those I deem legitimate, or initiating a disciplinary confrontation for behavior that threatens my control. My judgments come thick and fast, because individuality is trying constantly to assert itself in my classroom.

Individuality is a curse to all systems of classification, a contradiction of class theory.

Here are some common ways it shows up: children sneak away for a private moment in the toilet on the pretext of moving their bowels; they trick me out of a private instant in the hallway on the grounds that they need water. Sometimes free will appears right in front of me in children angry, depressed or exhilarated by things outside my ken. Rights in such things cannot exist for schoolteachers; only privileges, which can be withdrawn, exist.

The fourth lesson I teach is that only I determine what curriculum you will study (rather, I enforce decisions transmitted by the people who pay me). This power lets me separate good kids from bad kids instantly. Good kids do the tasks I appoint with a minimum of conflict and a decent show of enthusiasm. Of the millions of things of value to learn, I decide what few we have time for. The

choices are mine. Curiosity has no important place in my work, only conformity.

Bad kids fight against this, of course, trying openly or covertly to make decisions for themselves about what they will learn. How can we allow that and survive as schoolteachers? Fortunately there are procedures to break the will of those who resist.

This is another way I teach the lesson of dependency. Good people wait for a teacher to tell them what to do. This is the most important lesson of all, that we must wait for other people, better trained than ourselves, to make the meanings of our lives. It is no exaggeration to say that our entire economy depends upon this lesson being learned. Think of what would fall apart if kids weren't trained in the dependency lesson: The social-service businesses could hardly survive, including the fast-growing counseling industry; commercial entertainment of all sorts, along with television, would wither if people remembered how to make their own fun; the food services, restaurants and prepared-food warehouses would shrink if people returned to making their own meals rather than depending on strangers to cook for them. Much of modern law, medicine, and engineering would go too -- the clothing business as well -- unless a guaranteed supply of helpless people poured out of our schools each year. We've built a way of life that depends on people doing what they are told because they don't know any other way. For God's sake, let's not rock that boat!

In lesson five I teach that your self-respect should depend on an observer's measure of your worth. My kids are constantly evaluated and judged. A monthly report, impressive in its precision, is sent into students' homes to spread approval or to mark exactly -- down to a single percentage point -- how dissatisfied with their children parents should be. Although some people might be surprised how little time or reflection goes into making up these records, the cumulative weight of the objective- seeming documents establishes a profile of defect which compels a child to arrive at a certain decisions about himself and his future based on the casual judgment of strangers.

Self-evaluation -- the staple of every major philosophical system that ever appeared on the planet -- is never a factor in these things. The lesson of report cards, grades, and tests is that children should not trust themselves or their parents, but must rely on the evaluation of certified officials. People need to be told what they are worth.

In lesson six I teach children that they are being watched. I keep each student under constant surveillance and so do my colleagues. There are no private spaces for children; there is no private time. Class change lasts 300 seconds to keep promiscuous fraternization at low levels. Students are encouraged to tattle on each other, even to tattle on their parents. Of course I encourage parents to file their own child's waywardness, too.

I assign "homework" so that this surveillance extends into the household, where students might otherwise use the time to learn something unauthorized, perhaps from a father or mother, or by apprenticing to some wiser person in the neighborhood.

The lesson of constant surveillance is that no one can be trusted, that privacy is not legitimate. Surveillance is an ancient urgency among certain influential thinkers; it was a central prescription set down by Calvin in the Institutes, by Plato in the Republic, by Hobbes, by Comte, by Francis Bacon. All these childless men discovered the same thing: Children must be closely watched if you want to keep a society under central control.

It is the great triumph of schooling that among even the best of my fellow teachers, and among even the best parents, there is only a small number who can imagine a different way to do things. Yet only a very few lifetimes ago things were different in the United States: originality and variety were common currency; our freedom from regimentation made us the miracle of the world; social class boundaries were relatively easy to cross; our citizenry was marvelously confident, inventive, and able to do many things independently, to think for themselves. We were something, all by ourselves, as individuals.

It only takes about 50 contact hours to transmit basic literacy and math skills well enough that kids can be self-teachers from then on. The cry for "basic skills" practice is a smokescreen behind which schools pre-empt the time of children for twelve years and teach them the six lessons I've just taught you.

We've had a society increasingly under central control in the United States since just before the Civil War: the lives we lead, the clothes we wear, the food we eat, and the green highway signs we drive by from coast to coast are the products of this central control. So, too, I think, are the epidemics of drugs, suicide, divorce, violence, cruelty, and the hardening of class into caste in the U.S., products of the dehumanization of our lives, the lessening of individual and family importance that central control imposes.

Without a fully active role in community life you cannot develop into a complete human being. Aristotle taught that. Surely he was right; look around you or look in the mirror: that is the demonstration.

"School" is an essential support system for a vision of social engineering that condemns most people to be subordinate stones in a pyramid that narrows to a control point as it ascends. "School" is an artifice which makes such a pyramidal social order seem inevitable (although such a premise is a fundamental betrayal of the American Revolution). In colonial days and through the period of the early Republic we had no schools to speak of. And yet the promise of democracy was beginning to be realized. We turned our backs on this promise by bringing to life the ancient dream of Egypt: compulsory training in subordination for everybody. Compulsory schooling was the secret Plato reluctantly transmitted in the Republic when he laid down the plans for total state control of human life.

The current debate about whether we should have a national curriculum is phony; we already have one, locked up in the six lessons I've told you about and a few more I've spared you. This curriculum produces moral and intellectual paralysis, and no curriculum of content will be sufficient to reverse its bad effects. What is under discussion is a great irrelevancy.

None of this is inevitable, you know. None of it is impregnable to change. We do have a choice in how we bring up young people; there is no right way. There is no "international competition" that compels our existence, difficult as it is to even think about in the face of a constant media barrage of myth to the contrary. In every important material respect our nation is self-sufficient. If we gained a non-material philosophy that found meaning where it is genuinely located -- in families, friends, the passage of seasons, in nature, in simple ceremonies and rituals, in curiosity, generosity, compassion, and service to others, in a decent independence and privacy -- then we would be truly self-sufficient.

How did these awful places, these "schools", come about? As we know them, they are a product of the two "Red Scares" of 1848 and 1919, when powerful interests feared a revolution among our industrial poor, and partly they are the result of the revulsion with which old-line families regarded the waves of Celtic, Slavic, and Latin immigration -- and the Catholic religion -- after 1845. And certainly a third contributing cause can be found in the revulsion with which these same families regarded the free movement of Africans through the society after the Civil War.

Look again at the six lessons of school. This is training for permanent underclasses, people who are to be deprived forever of finding the center of their own special genius. And it is training shaken loose from its original logic: to regulate the poor. Since the 1920s the growth of the well-articulated school bureaucracy, and the less visible growth of a horde of industries that profit from schooling exactly as it is, have enlarged schooling's original grasp to seize the sons and daughters of the middle class.

Is it any wonder Socrates was outraged at the accusation that he took money to teach? Even then,

philosophers saw clearly the inevitable direction the professionalization of teaching would take, pre-empting the teaching function that belongs to all in a healthy community; belongs, indeed, most clearly to yourself, since nobody else cares as much about your destiny. Professional teaching tends to another serious error. It makes things that are inherently easy to learn, like reading, writing, and arithmetic, difficult -- by insisting they be taught by pedagogical procedures.

With lessons like the ones I teach day after day, is it any wonder we have the national crisis we face today? Young people indifferent to the adult world and to the future; indifferent to almost everything except the diversion of toys and violence? Rich or poor, schoolchildren cannot concentrate on anything for very long. They have a poor sense of time past and to come; they are mistrustful of intimacy (like the children of divorce they really are); they hate solitude, are cruel, materialistic, dependent, passive, violent, timid in the face of the unexpected, addicted to distraction.

All the peripheral tendencies of childhood are magnified to a grotesque extent by schooling, whose hidden curriculum prevents effective personality development. Indeed, without exploiting the fearfulness, selfishness, and inexperience of children our schools could not survive at all, nor could I as a certified schoolteacher.

"Critical thinking" is a term we hear frequently these days as a form of training which will herald a new day in mass schooling. It certainly will, if it ever happens. No common school that actually dared teach the use of dialectic, heuristic, and other tools of free minds could last a year without being torn to pieces.

Institutional schoolteachers are destructive to children's development. Nobody survives the Six-Lesson Curriculum unscathed, not even the instructors. The method is deeply and profoundly anti-educational. No tinkering will fix it. In one of the great ironies of human affairs, the massive rethinking that schools require would cost so much less than we are spending now that it is not likely to happen. First and foremost, the business I am in is a jobs project and a contract-letting agency. We cannot afford to save money, not even to help children.

At the pass we've come to historically, and after 26 years of teaching, I must conclude that one of the only alternatives on the horizon for most families is to teach their own children at home. Small, de-institutionalized schools are another. Some form of free-market system for public schooling is the likeliest place to look for answers. But the near impossibility of these things for the shattered families of the poor, and for too many on the fringes of the economic middle class, foretell that the disaster of Six-Lesson Schools is likely to continue.

After an adult lifetime spent in teaching school I believe the method of schooling is the only real content it has. Don't be fooled into thinking that good curricula or good equipment or good teachers are the critical determinants of your son and daughter's schooltime. All the pathologies we've considered come about in large measure because the lessons of school prevent children from keeping important appointments with themselves and their families, to learn lessons in self-motivation, perseverance, self-reliance, courage, dignity and love -- and, of course, lessons in service to others, which are among the key lessons of home life.

Thirty years ago these things could still be learned in the time left after school. But television has eaten most of that time, and a combination of television and the stresses peculiar to two-income or single-parent families have swallowed up most of what used to be family time. Our kids have no time left to grow up fully human, and only thin-soil wastelands to do it in. A future is rushing down upon our culture which will insist that all of us learn the wisdom of non-material experience; this future will demand, as the price of survival, that we follow a pace of natural life economical in material cost. These lessons cannot be learned in schools as they are. School is like starting life with a 12-year jail sentence in which bad habits are the only curriculum truly learned. I teach school and win awards doing it. I should know.

The author is a school teacher and has resigned and is practising his ideas in the Albany Free School. Some of his essays are collected under the title 'Dumbing us Down' . Some other related links are

1. http://www.neogenesis.com/game_theory/Gatto/Gatto.html - an abstract of many essays of Gatto.

2. Links to some lists of online essays authored by Gatto:

<http://www.he2k-plus.co.uk/gatto/index.htm>

<http://www.preservenet.com/theory/Gatto>

<http://www.oz.net/~baraka/dumbing.html>

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"The Intimate and the Ultimate"

Vinoba Bhave

Vinoba Bhave was born in the Indian state of Maharashtra in 1895, to Brahman parents. Bhave founded the Bhoodan Yojna or land-gift movement in 1951, and walked to all corners of India, collecting gifts of five million acres of land which he distributed to the poor. Gandhi identified Bhave as his spiritual successor. This selection of pieces, drawn from a larger collection of work by Bhave, is included because it offers a clear analysis of Western schooling ideals and a powerful vision of self-reliance and children working within community.

Self-reliance

Many people would agree about the importance of self-reliance in education. Self-reliance has a very profound meaning. There must be economic self-reliance through manual labor. Everyone must learn to use his hands. If the whole population were to take up some kind of handicraft, it would bring all sorts of benefits; class divisions would be overcome, production would rise, prosperity and health would improve. So that, at the very least, this measure of self-sufficiency must form part of our educational program.

Education must be of such a quality that it will train students in intellectual self-reliance and make them independent thinkers. If this were to become the chief aim of learning, the whole process of learning would be transformed. The present school syllabus contains a multiplicity of languages and subjects, and the student feels that in every one of these he needs the teacher's help for years together. But a student should be so taught that he is capable of going forward and acquiring knowledge for himself. There is an infinite sum of knowledge in the world, and each one needs some finite portion of it for the conduct of his affairs. But it is a mistake to think that this life-knowledge can only be had in any school. Life-knowledge can only be had from life. The task of the school is to awaken in its pupils the wish to learn from life. Most parents are anxious for their children to complete the school course so that they can get a salaried job and lead an easy life. This is the wrong way to look at education. Learning has value in its own right. The purpose of learning is freedom. Freedom implies not only independence of other people but also independence of one's own moods and impulses. The man who is a slave to his senses and cannot keep his impulses under control neither free nor self-sufficient.

The goal of education must be freedom from fear. In the Upanishads, when the guru is teaching his disciples he says to them: "O my students, whatever good conduct you find in me that follow; whatever you do not find good, that do not follow." That is to say, the guru gives students freedom. He tells them use their own judgment in deciding what is right and what wrong. They are not to think that whatever their guru says wholly right. It is certainly true that the guru is endeavoring to live by the truth, otherwise he would not be a guru; but he nevertheless cannot claim that his every

action will be in harmony with truth. And so he tells his students to be alert, to use their intelligence and examine his conduct, and to disregard whatever seems to be wrong. And by this means he enables his students to grow in fearlessness.

Fearlessness means that we should neither fear anything, nor inflict fear on others. Both those things are parts of fearlessness. A tiger cannot be called fearless; it may not be afraid of any other animal, but it is afraid of a gun, and it also inspires fear in other creatures. True fearlessness neither enslaves another, nor does slavishly submit to another.

The only sufficient basis for such fearlessness is the knowledge of the self. This self-knowledge is the foundation of education. But the education which children get today is the direct opposite of this. If a child commits some fault we slap it, and it begins to obey us because it is afraid. But we have taught it nothing of truth or action. Until education is really based on fearlessness there is no hope of any change in society. We ought to teach children never to submit to those who bear and strike them.

No knowledge without action

The separation of learning from labor results also in social injustice. Some people do nothing but study and others nothing but hard labor, and as a result society is split in two. Those who earn their bread by manual labor form one social class and those who do only intellectual work form another. In India, manual laborers are paid one rupee a day, intellectual workers are paid twenty-five or thirty rupees. A very great injustice has been done by rating the value of manual and intellectual labor so differently. And it is the abolition of such injustice that must be the goal of our education.

Human lives are like trees, which cannot live if they are cut off from the soil, but at the same time the business of agriculture must be done so efficiently that the smallest possible number of people are tied entirely to the land. These two principles may seem to be mutually contradictory, but they are both parts of Basic Education. It is a basic need of humanity to be in touch with the earth, and any nation or civilization which is cut off from it slowly but surely loses its vigor and degenerates.

If a man's house is full of medicine bottles, we infer that the man is probably ill. But if his house is full of books, we conclude that he is intelligent. Surely that is not right? The first rule of health is to take medicine only when it is absolutely necessary. By the same token, the first rule of intelligence ought to be to avoid, so far as possible, burying one's eyes in books. We consider medicine bottles to be a sign of a sick body; we ought to consider books, whether secular or religious, as the sign of a sick mind!

Student-teacher comradeship

An interesting light is cast on the Indian attitude to education by the fact that in all fourteen languages of India there is no root word corresponding to English "teach." We can learn, we can help others to learn, but we cannot "teach." The use of two distinct words, "teach" and "learn," suggests that these two processes may be thought of as independent of one another. But that is merely the professional vanity of the "teacher," and we shall not understand the nature of education unless we rid ourselves of that vanity. Our first task is to realize that an "uneducated" human being is nowhere to be found. But today, all too often, an ordinary schoolboy treats a first-class carpenter as if he were an ignorant boor. The carpenter may be a man of maturity and experience, a wise and skilled workman, who is of real service to his community. But simply because he cannot read or write, the "educated" boy treats him as an inferior.

Wherever two people live together in this kind of comradeship, giving and receiving mutual help, their real education is in progress. The place of books is, therefore, secondary. This idea troubles many people, who think that if the place assigned to books is reduced the students will be deprived of the most valuable tools of knowledge. Books do have a place as tools of knowledge, but it is a very minor place. The major need is for teacher and student to become work-partners, and this can happen only when the distinction between the teacher "teaching" and the student

"learning" can be overcome.

In matters of knowledge, no orders can be given. Education does not "discipline" students, it gives them complete freedom. Whether or not society free from governments is ever built in the larger world, such a society must be found in the world of students. If there is one thing of supreme importance for students it is this freedom.

"Only teaching"

A young man said that he wished to do some good work for society. "Tell me," I said, "what kind of work do you feel you could do well?" "Only teaching, I think," replied the young man. "I can't do anything else, I can only teach, but I am interested in it and I feel sure that I shall be able to do it well."

"Yes, yes, I do not doubt that, but what are you going to teach Spinning? Carding? Weaving? Could you teach any of these?"

"No, I can't teach those."

"Then tailoring, or dyeing, or carpentry?"

"No, I know nothing about them."

"Perhaps you could teach cooking, grinding, and other household skills?"

"No, I have never done any work like that. I can only teach..."

"My dear friend, you answer 'No' to every question, and yet you keep saying you can only teach. What do you mean? Can you teach gardening?"

The would-be teacher said, rather angrily, "Why do you ask all this? I told you at the beginning, I can do nothing else. I can teach literature."

"Good! Good! I am beginning to understand now. You mean you can teach people to write books like Tagore and Shakespeare?"

This made the young man so angry that he began to splutter.

"Take it easy," I laughed. "Can you teach patience?"

That was too much.

"I know what you mean," I said. "You can teach reading, writing, history, and geography. Well, they are not entirely useless, there are times in life when they are needed. But they are not basic to life. Would you be willing to learn weaving?"

"I don't want to learn anything new now. Besides I couldn't learn to weave, I have never before done any kind of handwork."

"In that case it might, of course, take you longer to learn, but why should you be unable to learn it?"

"I don't think I could ever learn it. But even supposing I could, it would mean a lot of hard work and a great deal of trouble. So please understand that I could not undertake it."

This conversation is quite enough to enable us to understand the psychology and characteristics of far too many of our "teachers." To be "only a teacher" means to be: completely ignorant of any

kind of practical skill which might be useful in real life; incapable of learning anything new and indifferent towards any kind of craftsmanship; conceited; and buried in books. "Only teaching" means being a corpse cut off from life.

Government control of education is dangerous

Throughout the world education is under the control of governments. This is extremely dangerous. Governments ought to have no authority over education. The work of education should be in the hands of men of wisdom, but governments have got it in their grasp; every student in the country has to study whatever book is prescribed by the education department. If the government is fascist, students will be taught fascism; if it is communist, it will preach communism; if it is capitalist, it will proclaim the greatness of capitalism; if it believes in planning, the students will be taught all about planning. We in India used to hold to the principle that education should be completely free from state control. Kings exercised no authority over the gurus. The king had absolutely no power to control education. The consequence was that Sanskrit literature achieved a degree of freedom of thought such as can be seen nowhere else, so much so that no less than six mutually incompatible philosophies have arisen within the Hindu philosophy. This vigor is due to the freedom of education from state control.

The status of teachers has sunk so low that they feel themselves to have no authority at all. They must follow whatever path the government directs. They are under orders, the servants of authority. They may perhaps modify the government schemes by a comma here or a semi-colon there, but they cannot do more than that. Today there is an attempt to expand education, and the number of schools and of teachers is being increased, but the spirit of the true guru is not there. A good teacher means one who is a good servant; a bad teacher means a bad servant; good or bad, he remains a servant.

All this results from the fact that the education department is a government department, it is not independent. The judges of the high court are also appointed by the government, and they are bound by the laws which the government makes. Nevertheless, they are much more independent. They have power, within the bounds of law, to give a verdict against the government. The teacher ought to have a much greater freedom than the judge, yet today the education department is less independent than the department of justice. The universities should demonstrate how every student, by his own labor, can gain food through knowledge and knowledge through food, nourishing his stomach with his two hands and his mind with his two eyes. They should show how the bread between knowledge and work can be closed. The students should have no fees to pay, there should be no hostel expenses and no salaries for the teachers. The workshop, the library and the laboratory should be provided by the government. There should be no need for holiday periods, for no one will feel any sense of confinement there.

The universities of today are not fitted for the poor, even though a few poor students may be admitted without fees as an act of grace. But the universities we envisage should be open to all. If the children of the rich cannot adjust themselves to such hard work, we may have to excuse them for an hour or two of labor as an act of grace.

Bought knowledge

If you ask someone what he is drinking he will answer "tea." There is sugar in it, but he never mentions the sugar, he never says he is drinking tea-and-sugar. The sweetness of the sugar permeates the tea, but the man drinks and says nothing about it. Education must be like the sugar, doing its work in secret. We can see the hands, nose, ears, eyes and tongue are active, but no one can see what the soul is doing. Our ears appear to be listening, our tongue appears to be talking. No matter what the appearance may be, it is not only the tongue that talks. In spite of appearances, it is not only the ears that hear. That which speaks and hears is the spirit within. And the spirit is invisible. The best education is similarly invisible. The more it is seen, the more imperfect it is.

Excerpted from Hern, M. 1996. Deschooling Our Lives. Stony Creek, CT: New Society Publishers.

The Educational System and Resistance to Reform: The Limits of Policy

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Abstract: I suggest some reasons why education has proved so resistant to reform. That the educational system is a system is, in some respects, more significant to this question than the fact that it deals with education; that it is a system militates against certain sorts of reforms being successfully adopted. I will also argue that policymakers' efforts to reform education are made more difficult because of lack of clarity of purpose. Though all agree that "excellence" is the goal to be pursued, there is little attention to the meaning of excellence, nor how we would recognize it if we saw it. Often, "excellence" is used synonymously with "competitiveness." I explore the limits of policy, and suggest that these limits are inescapable. Recognition of these limits may allow us to attend to those policy areas where success may be more likely.

I will argue here two propositions regarding public policy: (1) as an instrument for attaining systemic educational excellence, it is a poor tool; (2) "educational excellence," while universally desired, is a vague and ambiguous concept, and to the extent that it has a commonly understood meaning, that meaning has little to do with real excellence. In short, I will argue that there are some things that educational policy can do quite well, and some that it can do quite poorly, and that we should think carefully about which category any proposed policy falls into (Note One).

I do not offer solutions to the difficulties of pursuing excellence at the systemic level. It seems to be the case that the only way to eliminate these difficulties would be to cease treating the educational system as a system, which would then create a new set of problems. The difficulties of systemic reform are embedded in the needs and nature of the system itself. This paper is nothing so sophisticated as a formal systems analysis. It is merely an attempt to make sense of some readily observable facts about the operation of the educational system, as a system.

It sometimes seems that educational reform, the effort to eliminate defects systemically, is a perpetual quest of policy makers. There is always the sense that there was some golden age during which education was better than it is now in specific ways. This feeds a sense that things can be better -- the way they were -- if we only make the right systemic adjustments. Systemic flaws, on this view, are the result of bad policies and incompetent and self-serving people. It is on this premise that the energy of many bright and dedicated people has gone into seeking those policies that will produce an excellent educational system. These efforts are not devoted to individual schools, but to schools in general, to the system. The failure of decades of previous reform has not dissuaded policy makers from creating new tests, curricula, and other policy initiatives designed to guarantee systemic excellence.

Recently there has been an increase of people who have abandoned the efforts at systemic reform, convinced that it was impossible. Their response has been to abandon the idea of systemic excellence and commit to the notion that each person should make a commitment to the excellence of only a single school, allowing others to do the same (Chubb and Moe). Those in the lifeboats do not need to be concerned with the sinking ship.

This paper is an effort to explore some reasons we have been unable to achieve what we seek as excellence despite our efforts to do so, but offers no comfort for those who would abandon education as a public enterprise. There are things that systemic policy cannot accomplish. There are even noble and worthwhile things that systemic policy cannot accomplish. That is different from saying that public policy cannot accomplish anything.

The thesis of this paper is that understanding the nature of the educational system qua system may help explain why it is so resistant to change, and why systemic excellence does not result from policies intended to foster it. The basic thesis is that mediocrity is systemic; excellence cannot be. On this view, policy operates at high levels of aggregation while excellence is the result of individual pursuit and achievement. While policies intended to avoid systemic failure may indeed be successful, policies intended to produce systemic excellence rarely will be. This has to do with the nature of the system, but more fundamentally with the nature of excellence itself.

It is commonplace to the point of banality to say that education seems remarkably resistant to reform. This is not to say that education does not change; it does. The claim is simply put: reforms that increase the efficiency with which schools do the same things they have always done are more likely to be implemented successfully than reforms that attempt to change what schools do. The purpose of this paper will be to attempt to gain some understanding of why this is so by examining the implication of the fact that education takes place within a system.

I am taking it as uncontroversial that schools are resistant to reform, at least those of a certain type. Those reforms most consistent with efficient management of the system are those most likely to be accepted quickly; those reforms that make education more individualized, and therefore more difficult to manage, are most likely to be systemically ineffective. Put simply, reforms that make education more efficient are more likely to be effective than those that make education more personalized.

When I talk about resistance, I do not mean to suggest that such reforms are actively opposed. They rarely are. Quite the contrary, they are often enthusiastically embraced by teachers and administrators alike. For this reason, the ability of the system to resist efforts to change it is an interesting phenomenon. As such reforms diffuse through the system they tend to become less reforms as they are modified to conform to the systemic demands for efficiency.

On the other hand, we should not allow recognition of this problem to cause us to give up on educational policy as a means to improve education. While policies intended to manage the details of educational practice have been conspicuously unsuccessful in changing the nature of our schools, the same cannot be said of efforts to change the conditions of schooling. Policy can be spectacularly successful in this area. Schools in the South are more integrated (and were so in the North as well, before integration was abandoned as a public policy goal); poor children are fed; Head Start provides educational experiences in comfortable surroundings to many children lacking both at home; and children with special needs now have special attention. None of these successes guarantees that the quality of education is any closer to excellent, but each makes this outcome more likely by removing barriers to excellence. Using the description of the educational system developed by Green (1980), I will attempt to explore the logic of the system that helps us understand why pedagogical change seems to founder in predictable ways.

The Nature of the Educational System

Green suggested that to understand the problems one encounters in reforming the educational system, one must attend to its general character as a system apart from its educational purposes. Among the things that mark it as a system, he pointed to three "primary elements" that help define it as a system, having nothing to do with the educational purposes to which it is dedicated. He identified the three primary elements of the educational system as (1) schools, (2) a medium of exchange between schools, and (3) sequence. That there are schools simply points to the fact that education takes place within individual institutions. A "medium of exchange" is the system of credits and units that allows students to move from one school to another without having to begin over again or be randomly placed. Transcripts indicate what work the student has done in a way that allows the receiving school to place the student. Finally, the existence of "sequence" means both that the system is graded, and that the work done is sequenced by difficulty. These two sequences are related to each other. That is, the more difficult work is presumed to be done in the higher grades.

It is important to remember that these have nothing to do with the type or quality of education that goes on in the schools. This is a description of the educational SYSTEM, not the EDUCATIONAL system. In any system, a primary need is for efficient management. No complex, multifaceted, multi-sited and scattered enterprise can persist without good management. As a system, then, the educational system requires efficient management more than it requires good education. The claim is not that the system is inimical to good education; simply that, as a system, it is indifferent to the quality of education. Though it is also true that the operation of the system can make good education either more or less likely by placing more or fewer obstacles in the way of its attainment.

What, then, can we identify as the elements of the system that result in such persistence of practices that are consciously defended by so few educators? I will suggest that it is not the existence of schools themselves, but their internal organization and the relationship between them that offers some clues to the puzzle.

What I am suggesting is that to some degree and in some sense, the system is distinct from the people within it; the educational system so structures the environment of the individuals working in it that the consequences of actions within the system are often, and in fundamental ways, affected by the logic of the system more than by their own conscious intentions and beliefs. The purpose of this paper, then, is to see the ways in which the structure of the educational system militates against reforms that would favor improvement of educational practice, but favors those that increase efficiency.

In all of what follows, it will be well to remember that a premise of this analysis is that excellence is an individual accomplishment, not a systemic one. Systemic policies might just possibly be formulated that will allow excellence to emerge and survive, but it cannot be mandated or ensured.

Management of the System

What does efficient management mean in an educational context? What, in other words, does it mean to have the efficient management of education as a policy objective? (Though it may be more accurate to say that something else is the policy objective, and management of education is seen to be a necessary means to that end.) This question should seem strange. One cannot manage another's education. Nevertheless, "management" is the task that appears to lie behind many reform initiatives. Perhaps it is not so strange after all; since education is, after all, what is supposed to go on in schools, efficient management of the system includes, or possibly even should be defined by, management of education. What then is it that is being managed, and what should this sort of management look like?

First, education must be defined as something manageable. Since education certainly has something to do with knowledge, the knowledge must be conceived of and constructed as manageable. This is little more than tautological, but it is an instructive tautology, for it lifts one corner of the tent and allows a peek at the circus inside.

Curriculum documents, scope and sequence charts, specific objectives, and lesson plans are examples of tools that manage instruction, and imply the operation of the principle of sequence referred to above. If the education system is to serve children over a long span of years, there must be something to follow introductory courses. Content can be sequenced in at least two ways: what might be called "natural" and "artificial" sequencing. This is not the structural sequence of the system (grade levels), but of the subject matter content being managed within the system.

The Workings of Sequence

Natural sequencing is that sequencing required by the material itself. For example, we cannot give an independent reading assignment to children who have not learned to read, nor can we ask children who have learned neither counting nor number facts to solve addition problems. This is because learning some X's, or, alternately, learning to do some X's, requires that the learner already have mastered some prior Y's.

On the other hand, artificial sequencing assigns order on some discretionary (though not unreasonable) criteria. For example, high schools commonly teach European History before American History. There is no compelling reason to do so; it is just the way things are done. In elementary schools, mathematical operations are usually taught in the sequence: addition, subtraction, multiplication, and division. It is sometimes argued that this is a sequence of increasing difficulty, though it is not obvious that addition and subtraction are necessarily sequenced, and, in fact, some texts use the sequence: addition, multiplication (repeated addition), subtraction, and division (repeated subtraction) as proper and natural. In any event, it is not impossible to conceive of teaching multiplication first -- there is no logical necessity that children master addition and subtraction before learning multiplication. The sequences in these cases are not unreasonable, but they are discretionary: they could be otherwise, which is not so when the sequencing is natural.

Intersecting with this is structural sequencing: schools are divided into grade levels, and the expectation is that a child in level L this year will go on to level L+1 next year, L+2 the following year, and so on until she or he has left the system, either by graduation from the highest level or withdrawal.

Efficient management of all this is a basic need of the system as a system. With a sequence of knowledge and skills for children to master and for teachers to teach, there exists a precondition for managing instruction, often confused with managing learning. Teachers can be directed to teach specific material to children at level L. Some of this sequencing is natural, but probably more is artificial. Note also the means by which the material for level L is defined: what is taught at L is defined by the needs prerequisite to the content of L+1.

The content for each L can be defined by reference to the needs of the next L, all of which is driven, ultimately, by the definitions of what children are expected to have mastered by graduation -- "outcomes" -- which, in turn, are defined by the requirements for entry into college and/or the work place.

There are at least two ways to decide what ought to be taught at L: (1) content at L can be specified by what is sequentially prior to, or simplified versions of, material that will be taught at L+1, or (2) content at L can be specified by the developmental characteristics of children at L. If the child at L is no more than a simplified version of the child at L+1, these two methods of sequencing curriculum content coincide, and there is no problem. However, Kohlberg (1984), Piaget (1929, 1952, 1965), Elkind (1987), and the growing body of Whole Language research suggest that this is not so, that children's development is discontinuous and that children at L are other than smaller versions of their later selves. And if this view is right, there is a fundamental difference between "system centered" curriculum and "child centered" curriculum.

How does this aspect of the system work? Children enter and begin to move through the scope and sequence of the curriculum. Each year the teachers evaluate the children to decide whether they know enough of the content of L to move on to L+1. If not, they repeat L. Note that what we teach is not controlled by what we know about children at level L, but by what the child will need to know at L+1. This is a fundamental feature of the current system.

System Integrity

This describes something of the operation of sequence within a school, but the import of an educational system is that no school exists in isolation. Because we have a system, individuals can move from one school to another, and can pick up at the same level. Curriculums are standard enough so that a child at L in New York can move to California and still be in L. This is remarkable when one considers that schools in the United States are units within approximately 15,000 school districts, independent from each other with respect to governance. The only supervision over these districts is the usually rather loose supervision done by each state. In short, there are 15,000 independent school districts supervised by 50 independent state governments doing essentially the same thing.

There seems to exist something like a national curriculum, which serves as a baseline for content at any L. Where did this come from? In order for education to be effectively managed, there must be a scope and sequence prescribed. Further, a corollary of this aspect of management is the need to assess -- to make sure that what is supposed to be taught is being taught. Direct supervision would require too many supervisors, so assessment of teachers is done by testing children. This helps explain the existence of a national curriculum despite the multiplicity and theoretical independence of school districts. What I am suggesting is that the national curriculum has been shaped by the testing programs that serve the management needs of the system. These tests are an alphabet soup of norm referenced "instruments": SAT (both the Scholastic Aptitude Test and the Stanford Achievement Test), ITBS (Iowa Test of Basic Skills), CAT (both the Cognitive Abilities Test and the California Achievement Test), and the ACT (American College Testing program) among many others. These have had a strong influence on the content of textbooks and the subject matter taught in schools (Smith 1991).

The other force that has contributed to this national curriculum is the textbook industry. Textbooks are often the basis of instruction, and so the national textbook market is a force for standardization. Further, textbook publishers are often the publishers of the standardized achievement tests. Districts will often base their math and reading textbook selection decisions on the achievement tests given in the district. The feeling is that using a text and a test from the same publisher will give the students an edge. Consideration of these factors suggests that the degree of curriculum standardization is due partly to the text and test publishers apparently external to the system. However, it would be a mistake to see this as some sort of conspiracy or disservice. Rather, such curricular consistency is in fact a necessary feature of any educational system, for it is this consistency that allows students to transfer from one school to another, which makes obvious that individual schools are indeed part of the same system.

Thus one of the definitional features of the system also makes it so resistant to change. Note that an individual school could drastically change the nature of the education it provides, but that would hamper transfer. As long as we use nationally normed tests and nationally distributed texts to manage education, and as long as teachers are evaluated by the performance of their students on these tests, and as long as students are expected to be in grade L at X years of age, there will be a tendency for education to be based in scope and sequence charts rather than interaction between children and their teachers. On the other hand, without some force leading toward such standardization, the system would dissolve into individual units, disconnected from each other.

Excellence or Competition: The Nature of Systemic Goals One consequence of the way the system runs is that being "competitive" seems to be mistaken for "excellence." It seems to be the case that we have failed to maintain the distinction between these two quite different things. Excellence has become synonymous with increased test scores, preferably higher than those of our rivals. This is precisely to miss the point; it is excellence, not dominance, for which educators and students should strive.

Further, "excellence" has come to be seen as functional, not worth while in itself. Educational excellence is pursued not for the value we place on either excellence or education, but with the supposed competitive advantage we will have once we are excellent in education -- which comes to mean "first on test scores." There is no independent definition of what is meant by "educational excellence"; it is merely being "Number One" on whatever measure we are using to keep score in the contest. It seems likely that to fail to distinguish between being excellent and being first will ensure that we are neither. While a society might indeed gain a competitive edge by having more well-trained mathematicians, that provides no child with a reason to do well in math.

Further, though elevated test scores may be a good indicator that excellence exists -- even an inevitable result of attaining excellence -- nobody should mistake that for a definition of excellence. The fact that children with an excellent education often do well on certain tests does not mean that if we teach all students how to do well on those same tests that this will constitute anything resembling educational excellence. To think otherwise is to reverse cause and effect quite

precisely.

What then should count as evidence of excellence? That is a difficult question to answer, but not because excellence is difficult to recognize when encountered. Indeed, it is probably easy to recognize excellence (Note Two), but difficult to establish in advance what separates the excellent from the merely competent. Given a stack of excellent student essays, one will likely be able to recognize that fact. However, when one tries to specify what makes the essays excellent, one is struck by the fact that the merely competent essays have as much in common with the excellent ones as the excellent ones have with each other -- except for their excellence! Certainly the excellent essays are better than the competent ones, but that is merely a tautology. "Excellence" is less what is now being called an "outcome" as it is a quality of that outcome.

It is something recognized in its instantiation, but not definable in advance. So an obstacle to school reform is imbedded in the nature of excellence: (1) the fact of excellence is easily confused with one of its outcomes -- high test scores, and (2) it is easy to recognize excellence in education, but difficult -- perhaps impossible -- to define and quantify it. Nevertheless, a well-managed educational system needs to identify desirable outcomes and measure their attainment.

This partly explains the "minimum competency" movement: unlike excellence, competence is possible to define and measure. And if failure to achieve minimum competence is the definition of systemic failure, then the system that achieves widespread competence, that is, a system in which very few students fail to perform below minimally acceptable levels, can be defined as a well-managed system. Further, this sounds like a rational goal for a system to pursue. So systemic policy properly comes to be about competence and minimums. It can never address excellence in any meaningful way, and the first concern, systemically, is to avoid failure.

So while it may be the case that excellence cannot be standardized or defined in advance, it can still be recognized in its instantiation. If children are to aspire to excellence, not just compete, they need a variety of examples to emulate. They must also develop a desire to excel, if they lack this desire. As policy, this is far too vague to be useful in the pursuit of systemic excellence. But it may be the sort of sensibility that will allow excellence to be pursued locally, which may be the best that policy can do in this regard.

It might be argued this is just what current reform efforts are trying to do. The point of creating academically demanding curriculums is to provide standards to which the student will aspire. This is why students are required to demonstrate minimum competency at certain grades to be promoted; it is the motivation behind the increasingly academic nature of primary schools, including kindergarten. In short, the pursuit of excellence is the very reason for the sorts of policies I am criticizing.

In this respect my point is that children should aspire to high standards of excellence, not high test scores. But that is just the goal that policy has no way to effect. High test scores are a by-product -- perhaps an inevitable one, but still only a by-product, and no goal. Tests are ways of keeping score; they are not standards of excellence, but they have the advantage of being clearly articulated as policy goals. The sad fact is that there are too few classrooms in which an observer (or student) would be led to believe that excellence is the goal. Getting the work done is the clear agenda in most classrooms; minimally competent is acceptable.

This is not to deny that there are teachers who do demand excellence, or that there are students who aspire to it. The point is that the pursuit of excellence is neither the policy goal nor the norm within the system. Further, I wish to suggest that it cannot be, not in any meaningful way. Minimally competent is the standard to which teachers hold students, and to which students are taught to aspire, if "aspire" is the correct word. The alternative standard presented by the system is a competitive one. That is to say, those students who show academic promise and ability are not encouraged to excel; they are encouraged to compete. Again, the point is missed. A desire to be excellent is the desire to be the best one can be, not the best in the class.

Real Reform: The Exception?

Anyone with even a passing familiarity with schools can disprove my thesis by pointing to the teachers who, despite the pressures to conform, create learning environments with their children at the center, who respond to the needs of the children in those classes, who pursue and insist on standards of genuine excellence, and who manage to placate, if not exactly conform to, the demands of the system they are within, if not exactly part of. But it does not seem that such practices spread so that they become typical of the system as a whole. This is true even when the value of the reform is widely recognized.

Most elementary educators recognize that children learn best when they do, rather than when they are done to or told. The value of reading, rather than doing work book pages, the value of writing rather than doing grammar exercises, the value of doing hands-on science instead of reading out of text or listening to lectures -- these are all acclaimed with near unanimity to be improved methods of teaching children. Generations of teachers have been taught this in classrooms, workshops, and in-service training courses, and they recognize the truth of it from their own experiences with children. Generations of teachers have made commitments to do this kind of teaching in their classrooms, and very few would deny that it is superior. All the above notwithstanding, the standard in our classes today is, as it was fifty years ago, chalk and talk. There are certainly exceptions, but that is the point; such teachers and such practices have always been the exception, and remain so (Note Three). In other words, the system cannot completely negate the efforts of those exceptional individuals and groups who make their classrooms or schools places where the needs of the children take priority over those of the system, but those pockets of true reform remain just that -- pockets. The demands of the system are more powerful than the needs of the children more often than not.

More than that, this is predictable from the fact it is a system; systemic policies, as pointed out above, deal in competence and minima, not excellence. The best that policy makers may be able to do is be aware of the requirements of excellence and make policies that make its attainment no more difficult than necessary.

Perhaps the point of this essay is best expressed as a caution that the process of making educational policy ought to not exceed the proper domains of what policy can do. While it is certainly the case that there are times when a person's reach should exceed his or her grasp, there is also a danger in articulating poorly conceived goals as ends to be seriously sought. Before publicly announcing that a new policy initiative will make schools excellent, perhaps we need to examine more closely the meaning of excellence, and the role of the public in its attainment in any school. Certainly public policy can address some obstacles to excellence, but that is not at all the same thing as promising that any new policy initiative will result in excellent schools.

Notes

Note One: I would like to express my deep appreciation to Tom Green for his inspiration and guidance in the thinking that led to this paper.

Note Two: This seems a controversial claim, and it is one I will not take the time here to defend. However, the outline of the argument is this: When Michael Apple and William Bennett disagree about what an excellent education looks like, it is not the definition of excellence about which they are disagreeing, but the definition of education. We can, in short, recognize that someone is doing an excellent job of educating, even if the sort of education is judged to be bad or wrong.

Note Three: My thesis would be that, if there were a way to study the number of teachers and/or schools engaged in truly child-centered education for the last fifty years, we would discover that the number, as a proportion of the whole, has been remarkably constant.

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Web resources

Links with a brief description

1. <http://www.groups.yahoo.com/group/asha-upe/files/>
http://groups.yahoo.com/group/asha-upe/files/AlternativeEducationreport_ae.htm
Article describes the work done by Digantar, Eklavya, Shishya Yatan and Rishi Valley Education center in terms of alternative approaches to education.

<http://groups.yahoo.com/group/asha-upe/files/LearningToBeBackward.htm>
Article by Krishna Kumar about how the curriculum structure is insensitive to the students' social background and results in their alienation eventually 'pushing them' out of the school system.

<http://groups.yahoo.com/group/asha-upe/files/LearningFromConflict.htm>
An interesting article that talks about how the school system completely excludes social issues that children are otherwise exposed to
2. <http://www.india-seminar.com/2000/493.htm>
Issue No. 493 on the National Curriculum debate

<http://www.india-seminar.com/2000/493/493%20problem.htm>
Krishna Kumar explores what the problem with the national curriculum and is also a critique of the NCERT document.

<http://www.india-seminar.com/2000/493/493%20padma%20m.%20sarangapani.htm>
Also a critique of the NCERT framework. The article argues that the new curriculum still does not shift of the focus of the school system from the teacher to the student.

<http://www.india-seminar.com/2000/493/493%20rohit%20dhankar.htm>
A critique of the document from the perspective of a human being's role in society and the learning processes. This article also analyses the different tint given to secularism in this document.

There are a couple of other good critiques in this site.
3. www.swaraj.org/shikshantar
Some interesting links on education from Shikshantar web site

<http://www.swaraj.org/shikshantar/bhave.html>
An article on self-reliance in education that makes students independent thinkers.

http://www.swaraj.org/shikshantar/resources_joshi.html
This describes what the objectives of real education should be.

http://www.swaraj.org/shikshantar/resources_soni.html
The article makes an argument for the Gandhian model of basic education to be made applicable to schools today.

http://www.swaraj.org/shikshantar/resources_publications.html
This has links to Shikshantar's publications including their magazine Vimukt shiksha. Various alternatives to education including learning communities are discussed.

<http://www.swaraj.org/shikshantar/resources.html>

This has links to social and development issues and is an online library resource on Shikshantar's web site.

4. www.pathsoflearning.org

<http://www.pathsoflearning.org/AtoZintro.cfm>

Paths of learning is a resource network in USA with a focus on meaningful learning. An introduction to various learning theories and a note on how the approaches to learning evolved with examples of various schools following these methods.

5. <http://www.cs.wisc.edu/~param/asha/info/5127.html>

Literatecy in Kerala, EPW article

Web sites

- <http://www.creatinglearningcommunities.org>
- <http://www.educationrevolution.org/>
- <http://www.edrev.org/almanac.htm>
- <http://www.educationrevolution.org/alofedchoic.html>
- <http://www.aera.net/meeting/am2001/>
- <http://www.pathsoflearning.net>
- <http://www.pathsoflearning.org/library/intro2000.cfm>
- <http://www.vidyaonline.net>
- <http://www.ashoka.org/>
- <http://www.changemakers.net>
- <http://www.auroville.org>

Educational resource support publishers

- <http://www.seagullindia.com>
- <http://www.kalibooks.com>
- <http://www.tulikabooks.com>
- <http://www.katha.org>
- <http://www.kathalaya.org>
- http://www.pitara.com/books/aha_books/index.htm
- <http://www.goacom.com/oib/index.html>
- <http://www.sutradhar.com>
- <http://www.vikramshila.org>