Journal of the Krishnamurti Schools

JOURNAL OF THE KRISHNAMURTI SCHOOLS

Krishnamurti Foundation India
No 13, January 2009

Journal of the Krishnamurti Schools

No. 13, January 2009

An Educational Journal

This is a journal on education that is brought out annually. It is an anthology of writings by educators, teachers and thinkers exploring a new vision of education in its many dimensions—philosophy, psychology, classroom experience, curriculum, nature and environment and contemporary issues. It lays special emphasis on J. Krishnamurti's principles of education. It will be of use to teachers, parents, educational administrators, teacher-educators and to any individual interested in education.

Please note: The Journal of the Krishnamurti Schools No. 14 will be out in January 2010. The Order Form is included in this journal.

Contents

published annually by: Krishnamurti Foundation India, 124-126, Greenways Road, RA Puram, Chennai-600 028.
e-mail: publications@kfionline.org
website: www.journal.kfionline.org

subscription details

Within India: Rs. 120/-. May be remitted by D.D. or Cheque in favour of Krishnamurti Foundation India payable at Chennai.
(For outstation cheques please add Rs. 25/- towards Bank Charges)

Outside India $5 by Bank Draft in favour of Krishnamurti Foundation India or by Pay Order.

On Ambition: A Talk to Students

We have heard people say, that without ambition, we cannot do anything. In our schools, in our social life, in our relationships with each other, in anything we do in life, we feel that ambition is necessary to achieve a certain end, either personal or collective or social, or for the nation. You know what that word 'ambition' means? To achieve an end, to have the drive, the personal drive; the feeling that without struggling, without competing, without pushing you cannot get anything done in this world. Please watch yourself and those about you, and you will see how ambitious people are. A clerk wants to become the manager, the manager wants to become the boss, the minister wants to be the prime minister and the lieutenant wants to become the general. So, each one has his ambition. We also encourage this feeling in schools. We encourage students to compete, to be better than somebody else.

All our so-called progress is based on ambition. If you draw, you must draw much better than anybody else; if you make an image, it must be better than that made by anybody else; there is this constant struggle. What happens in this process is that you become very cruel. Because you want to achieve an end, you become cruel, ruthless, thoughtless, in your group, in your class, in your nation.

Ambition is really a form of power, the desire for power over myself and over others, the power to do something better than anybody else. In ambition, there is a sense of

comparison; and therefore, the ambitious man is never really a creative man, is never a happy man; in himself he is discontented. And yet, we think that without ambition we should be nothing, we should have no progress.

Is there a different way of doing things without ambition, a different way of living, acting, building, inventing without ambition, without this struggle of competition in which there is cruelty and which ultimately ends in war? I think there is a different way. But, that way requires doing something contrary to all the established customs of thought. When we are seeking a result, the important thing to us is the result, not the thing we do, in itself. Can we understand and love the thing which we are doing without caring for what it will produce, what it will get us, or what name or what reputation we shall have?

Success is an invention of a society which is greedy, which is acquisitive. Can we, each one of us, as we are growing, find out what we really love to do—whether it is mending a shoe, becoming a cobbler, or building a bridge, or being a capable and efficient administrator? Can we have the love of the thing in itself without caring for what it will give us or what it will do in the world? If we can understand that spirit, that feeling, then, I think, action will not create misery as it does at the present time; then we shall not be in conflict with one another. But it is very difficult to find out what you really love to do, because you have so many contradictory urges. When you see an engine going very fast, you want to be an engine driver. When you are young, there is an extraordinary beauty in the engine; I do not know if you have watched it. But later on that stage passes, and you want to become an orator, a speaker, a writer, or an engineer, and that too passes. Gradually, because of our rotten education, you are forced into a particular channel, into a particular groove. So you become a clerk or a lawyer or a mischief-monger; and in that job you live, you compete, you are ambitious, you struggle.

Is it not the function of education while you are very young, particularly in a school of this kind, to help to bring about such intelligence in each one of you that you will have a job which is congenial to you and which you love and want to do, and that you will not do a job which you hate or with which you are bored but which you have to do because you are already married, or because you have the responsibility of your parents, or because your parents say that you must be a lawyer when you really want to be a painter? Is it not very important, while you are young, for the teacher to understand this problem of ambition and to prevent it by talking it over with each one of you, by explaining, by going into the whole problem of competition? This will help you to find out what you really want to do.

Now, we think in terms of doing something which will give us a personal benefit or a benefit to society or to the nation.We grow to maturity without maturing inwardly, without knowing what we want to do, but being forced to do something in which our heart is not. So, we live in misery. But society—that is, your parents, your guardians, your friends and everybody about you—says what a marvelous person you are, because you are a success.

We are ambitious. Ambition is not only in the outer world, but also in the inner world, in the world of the psyche, the spirit. There also we want to be a success, we want to have the greatest ideals. This constant struggle to become something is very destructive, it disintegrates, it destroys. Can't you understand this urge to 'become', and concern yourself only with being whatever you are, and then, from there, move on? If I am jealous, can I know I am jealous or envious, and not try to become non-envious? Jealousy is self-enclosing. If I know I am jealous and watch it and let it be, then I will see that out of that something extraordinary comes.

The 'becomer', whether in the outer world or in the spiritual world, is a machine, he will never know what real joy is. One will know joy only when one sees what one is and

lets that complexity, that beauty, that ugliness, that corruption, act without attempting to become something else. To do this is very difficult because the mind always 'wants to be' something. You want to become philosophers or become great writers; you want to become an M.A. But you see, such ambition is never a creative thing. In that ambition there is no initiative because you are always concerned with success. You worship the god of success instead of understanding the ambition itself. However poor you may be, however empty, however dull, if you can see the thing as it is, then that will begin to transform itself. But a mind occupied in 'becoming' something never understands the 'being'. It is the understanding of what one is, the being of what one is, that brings an extraordinary elation, a release of creative thought, creative life.

Editorial

The thirteenth issue of the Journal is in your hands. With the advent of the teen years, we editors were not sure what to expect from our young Journal. Rebellion? Or maybe mood swings? Or loud, garish earrings? To our delight, this adolescent appears to be handling the transition smoothly. Issue thirteen of the Journal is in some ways a typical thirteen-year-old: a many-sided jewel, its faces flashing exuberance, reflectiveness, practicality and maturity.

As we sat together to finalize this issue, we were transported from one world to another: a dance class in Bangalore, a government school in Tamil Nadu, a village in Turkey, and even the moon! With such variety, it was a pleasant surprise to find that the articles echoed each other in unexpected ways. In fact, this is something that happens every year, and this time we discovered that several pieces were about educating the educator in one way or another. The phrase 'teacher as learner' is one that rolls quickly off the tongue, but when examined closely and experienced firsthand, it represents a truly profound concept. We are too used to seeing teaching and learning as mutually exclusive categories. To break that mould takes, among other things, humility. Interestingly, while the authors make this point in gentle eloquence, the absolute and uncompromising nature of the demand comes through. O. R. Rao writes of the need to 'clear up our inner incoherences' while we nurture growing children: 'Unless [teachers] themselves have attempted the task of being whole, they cannot guide another human being towards wholeness.' Siddhartha Menon describes the subtlety involved in 'reading a child', drawing parallels with the way in which we read a poem for understanding and enjoyment. 'Without this attention,' he says, 'we would be lucky if our actions met the needs…of our children.'

The Editors' piece addresses a crying need for us as adults to critically examine the everyday societal patterns we seem to accept so unquestioningly. Perhaps without our even realizing it, our silent 'endorsement' of certain trends may be giving our children powerful lessons for life. In a different vein, N. Venu points out that in many schools, teachers outside the classroom are as oppressed as their students are inside the classroom. When the teacher herself has more autonomy and creative responsibility, this will reflect in the classroom as well, and he suggests simple but radically new structures that may help such a shift to take place. V. Arun's article shines with the palpable excitement of discovery in a teacher—if we are curious and wondering about why the wind blows and about the phases of the moon, surely our students will be infected with the same enthusiasm.

Other articles this year give us ideas for bringing music (Ruth Chandy) and dance (Shabari Rao) into our classes, and for giving our students the opportunity to interact closely with nature (Kanthi Phatak). R. Venkatesh removes some of the mystique associated with great teachers by giving us several important suggestions that any teacher can implement to be more effective. Two articles give us clues to supporting academic autonomy and fulfillment in our students. Keerthi Mukunda describes activities that make use of the child's innate need to communicate meaningfully with others, and thereby improve the quality of their writing along several specified dimensions. And Tanuj Shah documents an unusual Mathematics programme for Class 5, where a combination of self-paced learning and taught modules allows the students to gain both competence and confidence.

Some stories tell of wider influences. Sumitra Gautama and Suchitra Ramakumar report on an extraordinary cooperative venture between an enterprising government and a caring school. Ashna Sen reports on a summer Mathematics programme in Turkey—more than just excellent Mathematics, the people gathered there experienced a sense of camaraderie and community that is rarely to be found.

Moving into a world of intangibles, Brian Edwards takes us on a historical exploration of envy and love, and Kabir Jaithirtha explores a profound understanding of beauty, order and freedom that goes beyond everyday meanings. An engagement with these keeps us alive and questioning. Kalpana Venugopal reiterates this need for teachers to be self-inquirers, in her essay

on holistic education, bringing us full circle back to educating the educator! And finally, Stephen Smith shares with us the results of an extended dialogue with young people on 'schooling for life', presenting a model that beautifully echoes the sentiments of Kalpana's article.

The contributors to this Journal are almost all teachers who have made the time to put their thoughts down on paper, so that others may share the benefits of their learning. Over the period of gathering and editing them, these articles have become familiar friends to us. We now present them to you, in the hope that you too, may enjoy them in the months to follow.

Educating the Educator: Self-inquiry for parents and teachers

O R Rao

To give knowledge which does not become an end in itself and to educate the mind to have a long vision, a wide comprehension of life, is not possible if education is based on authority.

And education also, does it not mean educating the human being—you understand?—not acquiring mere techniques, a skill, but educating a human being to live with great art? That means not only technological knowledge—right?—but also the immense limitless field of the psyche, going beyond it, that is a holistic education—you understand?

So education means a holistic approach to life, cultivating the brain technologically—you understand?—and also cultivating the brain to be free of its own petty little self. That requires teachers who understand this, who are committed, who are responsible.

J Krishnamurti

The crisis in education

Some years ago when the debate was active, as it still is, about what the nature and content of school education in the country should be, R.K. Narayan, the famous novelist, focused our attention on the question with an arresting metaphor. He made a fervent plea in parliament, 'Reduce the size of the school bag!'

However, while most people were in sympathy with and understood the reasons for this plea—that children should not be made the victims of a monstrous system of information overload and thus be deprived of their childhood—nothing but some feeble expressions of sympathy and agreement came out of all this. Understanding and sympathy were crippled by doubts about the practicality of R.K. Narayan's solution. For was this not the age of the knowledge explosion, was knowledge not growing exponentially in all fields—in the mathematical, physical, biological and social sciences—and was it not imperative to train the young mind early to absorb all this? Early preparation for such specialized and high-volume training seemed inevitable

whatever the price the school girl or boy had to pay for it.

And this price was and remains very high. Quality is pushed aside to make way for quantity, and rote and mechanical learning replace real understanding. Teaching, instead of being innovative and sensitive to the students' minds, becomes schedule-driven and bound to standard curricula and syllabi, leaving the teacher with very little room for his or her own creativity and imagination in teaching. Further, what can one say about the means to ensure the achievement of these priorities? As everyone knows, these are: competition and the spur that the fear of failure gives. Little thought is given as to what happens to the young mind which is constantly comparing itself to others in the competitive jungle, and as to what happens to the weak that go to the wall in this struggle. We have been witnesses to the pathetic sight of children barely out of their infancy being made to 'compete' for places in kindergarten classes by being coached to recite the alphabet and to recognize colours and numbers and so on. The Darwinian principle of the survival of the fittest prevails here and the young become one more species in the struggle for survival.

The young become the means to another end too—they become the greatest national resource in the race for 'development'. That is, like labour and capital, they become a resource, a factor in the industrial process and are paid the compliment of being the most important factor because they provide the most important input—knowledge. Knowledge too becomes a factor of production. Fittingly and ironically the government ministry which deals with education, is the Ministry of Human Resources Development. The courts declare that schools and colleges are subject to the labour laws that govern industrial labour. This is in keeping with the trend that has seen the sprouting of schools run on commercial lines all over the country in large numbers.

The young thus become a driven generation—driven by the knowledge and information explosion,, by the global political–economic process, and by the competitive struggle to survive in this process. The content of school education is determined by political masters of the day with their political and religious ideological agendas. Is it any wonder then that youth in the 'sophisticated' atmosphere of the big cities are seeking in increasing numbers to escape from the tensions of being subjected to such educational processes by resorting to drugs, drink, addictive television watching, indulgence in junk food, sleazy web-sites on the Internet and other escapes that a sensate culture offers in plenty ?

What happens to the young mind and heart which is subjected to all this? Early childhood is or ought to be a period for stories, myth and fantasy—a period when the boundary between imagination and

'reality' is not clearly drawn. It is a fairyland in which fantasy and the 'real world' are mixed up inextricably and in which the child would like to wander freely. Instead, the educational process drives a straight railroad through the fairyland and from the railway carriage in which facts and numbers are being drilled into the mind, the child looks out longingly at the fairy landscape outside. In adolescence there is an explosion of the whole being—physical, emotional and mental. Logical reasoning is discovered, and so are religious and metaphysical questions about good and evil, and about ultimate human destiny. The sight of social injustices and evils gives rise to boundless idealism which if frustrated, as often happens, turns into boundless cynicism. Overhanging all this, there is the overwhelming question of sexual identity and one's relationship to it. In short, the adolescent is a great mystery to himself/herself (as all of us indeed are to ourselves). The first encounter with mystery gives rise to great turbulence. Hence it is that this is the time when the young person should have the time and space to get closely in touch with all these thoughts and emotions, and to feel his or her way from being a boy or a girl to becoming a young man or a young woman.

How the adult world, and more particularly the teachers (which term includes, for Krishnamurti, the parents) will respond to the child's delicately balanced mental and emotional states will obviously determine the future growth of the child. Will the response be sensitive and nurture inner mental and emotional growth or will it distort and cripple the young minds and hearts? Will the whole being of the growing child be nurtured or will the adult world plump for 'safety first' and unthinkingly and unfeelingly put the child through the mechanical educational processes prevalent today?

Surely it is this crisis, this critical question facing us today that is the fundamental one, and not merely questions about the content of syllabi and the best methodologies to impart them to students. And surely this crucial question of the inner growth of the child cannot be successfully met unless the adults themselves are sensitive and attentive to their own inner world of feelings, thoughts and doubts; unless they themselves are capable of self-knowledge and inner growth. If such sensitivity to their inner worlds is not there, the adult generation is likely to become and also to bring up, as the sociologist Max Weber said, 'Specialists without spirit and sensualists without heart.'

And if this happens we will have to lament with T.S. Eliot:

> *Where is the Life we have lost in living?*
>
> *Where is the wisdom we have lost in knowledge?*
>
> *Where is the knowledge we have lost in information?*

Krishnamurti's vision of education

Some teachers and parents may feel that this account of the state of education prevailing in the country now is exaggerated or even distorted. For, has not education become much more child-centered now than before, at least in the more progressive schools, of which the number is growing? Is not the development of the whole personality of the child one of the core concerns of all good schools in the country— witness the vast range of 'extra-curricular' activities which are offered by schools, and the greater number of options which are now available to students as subjects for study? Ways to impart value education is a matter of great concern to all teachers and educationalists, and various ways to incorporate life values into the curriculum have been worked out.

However, while much of all this is undoubtedly true, we have to admit, if we are honest, that the vital centre, the well-spring from which the life-giving waters flow, is somehow missing from all this. To change the metaphor, there are many spokes to the wheel—giving full scope to the skills and talents of the child and so on—but where is the hub? True creativity in responding with our whole being to life and all the trials and travails that life is surely going to bring to every child, surely goes beyond, as Krishnamurti says, the acquiring of mere techniques and skills. It involves as he says, '…not merely technological knowledge, but also the immense limitless field of the psyche, going beyond it, that is holistic education. That requires teachers who understand this, who are committed, who are responsible.'

In other words, unless the teachers themselves have explored and tried to understand the 'immense field of the psyche' in themselves—their own hidden motivations, urges, fears, desires, aims in life and so on—they cannot hope to educate children in a holistic way. Unless they themselves have attempted the task of being whole, they cannot guide another human being towards wholeness.

Hence Krishnamurti says, 'The real problem in education is the educator.' In saying this he is not questioning the competence of the teacher in particular fields of knowledge, but is pointing out the importance of the teacher's own sensitivity to the totality of the situation—to the growing child's inner needs and to the forces and influences which are shaping the minds and feelings of both the child and the adult.

He says:

. . .it is only when we inquire into the significance of the values which society and religion have placed about us that we begin to find out what is true. It is the function of the educator to examine deeply his own thoughts and feelings and put aside those values which have given him security and comfort, for only then can he help his students to be self-aware

and to understand their own urges and fears. . .. True religion is not a set of beliefs and rituals, hopes and fears and if we can allow the child to grow up without these hindering influences, then perhaps as he matures, he will begin to inquire into the nature of reality, of God. That is why, in educating a child, deep insight and understanding are necessary.

To quote Krishnamurti again:

Unless we are deeply touched by the problem, we will never find the right way of education. Mere technical training inevitably makes for ruthlessness, and to educate our children we have to be sensitive to the whole movement of life. What we think, what we do, what we say, matters infinitely, because it creates the environment and the environment either helps or hinders the child.

So is there anything we can learn from science as people interested in wisdom, in coming upon a deeper understanding of life and of ourselves? Science, or scientific knowledge, does not deal with values per se, with what is right and what is wrong. It does not say that you should be kind. Scientific knowledge is said to be value-neutral. And yet one must discover what is called the scientific spirit, for this may have something to teach us. The spirit is always more important than the technique, the knowledge or the method in any activity.

As one educator in a Krishnamurti school put it, 'We teach what we know, we educate what we are.'

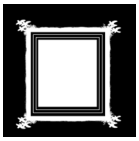
In other words, what is being called for, or 'demanded' from the educator (which term includes the parent and the teacher) is self-knowledge, inner sensitivity to one's own motives, the dropping of negative and destructive urges, of all kinds of 'incoherences' in one's own life. And Krishnamurti's teachings—both those concerned directly with education, and those concerned with the whole field of life—provide a vast and detailed map, one may say, of this inner psychological life of ours. These teachings contain extraordinarily illuminating statements which cast light on both the outer and inner aspects of our lives and help us, if we pay heed to what he says, to clear up our inner 'incoherences' and act with clarity and lightness in the outward sphere in our relationship with ourselves, in the family, with children, in institutional situations and in the world at large.

Thus to take but one of his seminal statements, '...to be is to be related and one can see oneself in the mirror of relationship'. If we really take this to heart and watch our inner motives, urges and behaviour in our relationships, the watching is bound to reveal hitherto hidden aspects of our being to us, with its many varied and infinitely nuanced strands of self-interest or non-awareness. Again, to realize that the 'thinker is the thought' and the 'controller is the controlled' is to realize that far from being free entities 'in charge' and in control of our thoughts and feelings, we are in

fact at their mercy, totally conditioned by ideas and emotions which have been programmed into us by the familial, social, political and ideological milieu in which we happen to live. This brings us to his other seminal statement, 'You are the world', which makes clear how, far from being the unique, special entities we believe ourselves to be, we share this universal conditioning with the rest of mankind.

When we meditate on these truths, we are as Krishnamurti asks us to, '…inquiring into the significance of the values which society and religion have placed about us and begin to find out what is true', so that we can help children '…to be self-aware and to understand their own urges and fears.'

The process of education, in this vision of it, is not one in which there are any final, authoritative answers. Instead, there is only the natural dropping, for both the teacher and the student, of 'incoherences', confusions and conflicts as they are revealed through awareness. This is an 'open ended' exploration in which no 'final solutions' are being looked for, but one in which the exploration itself is the 'solution', for, as Krishnamurti said, 'There are no answers to life's questions. The state of mind that questions is itself the answer.'



Walks: To Nurture the Natural

Kanthi Phatak

Exulting in an unexpected shower in the summer, running off to float paper boats in puddles after the rains, looking for delicious berries at a particular time of the year, watching little insects, picking wild flowers to make bouquets, finding shining smooth pebbles or shells, feeling the soft sand and the rushing water on the beach, climbing a giant tree, running up and down a hillside—the list can go on. The sensorial and wonder-filled experiences of a child seem to get embedded in the growing mind and enrich it immeasurably. One often hears adults talk about their growing years fondly recalling such experiences, and along with such recall, is seen an expression of sensitivity towards and love of nature. In the presence of nature—whether that of a single tree, an insect or a bird that passes by, the vast expanse of sea or the towering mountains—a self-abandonment takes place. This seems to have the capacity to bring forth a mind that is naturally gentle and non-destructive.

It is often noticed that when there is a loss of contact with nature there is a tendency to gravitate towards activities based on ideas, an accumulation of knowledge and gratification through entertainment. In other words, there is a seeking of stimulation that is provided by the activity of the intellect alone. Perhaps, to pause and watch day-to-day natural phenomena, for instance, a sunset or sunrise, or the movement of clouds, could make a tremendous difference and allow for a nurturing quietness to come into being.

Research as well as our own observation of the world shows the evidence of the ill-effects of growing materialism and consumerism. Our planet is groaning under the exploitation of resources that is driven by human wants, and this is further compounded by an economic paradigm that is largely geared towards the gratification of these wants. It is possible to sow the seed of love and care for nature; and therefore it is imperative for us, engaged in educating

the young, to create opportunities for them where they may come upon the beauty, wonder and the mystery of the natural world.

When we have such experiences we feel deeply connected to nature and nourished by it. And that with which we are deeply connected, is something that we protect from exploitation and destruction.

> *What is this education doing actually? Is it really helping man, his children, to become more concerned, more gentle, or generous; is it helping him not to go back to the old pattern, the old ugliness and naughtiness of this world? If he is really concerned, as he must be, then he has to help the student to find out his relationship to the world, not to the world of imagination or romantic sentimentality, but to the actual world in which all things are taking place. And also to the world of nature, to the desert, the jungle or the few trees that surround him, and to the animals of the world. Animals fortunately are not nationalistic; they hunt only to survive. If the educator and the student lose their relationship to nature, to the trees, to the rolling sea, each will certainly lose his relationship with Man.*
>
> J Krishnamurti

Children have a natural affinity for outdoor activities. One activity that is easily done is to take children on a walk around a campus. On such a walk it is possible to look, listen and smell and even a campus which we think we 'know' springs many a surprise.

It is amazing how young children observe a variety of things around them. At school, to help them along, we ask questions or urge them to 'sense' their surroundings. The teacher might say: look through the canopy of different trees, the sunlight streaming through the leaves, the patterns against the blue sky and the play of shadows on the ground. We go to the pond in the campus and look at the landscape around it and draw. Sometimes we sit quietly on the lawn at different times of the year without moving around and watch the insects. Every term or every month we look at the trees that are in blossom or bearing fruits. We notice the various seasonal and cyclical changes in plants and animals that are set to their unique rhythms and patterns.

To point out the interdependence among living things, there are exercises that are designed to identify plants that provide nutrition. We also look for micro-habitats away from human activity where, around a rock or log, many living creatures go about the important work of breaking down dead matter . There are the 'yuck' moments for the children when rotting leaves or dead animals give off unpleasant odours or present gruesome sights. There are

spontaneous exclamations of horror when a cat is seen with a squirming squirrel or mouse in its jaws. This is an opportunity to talk of the vital role of bio-degradation; and with sensitivity we could talk about food chains and their delicate balance and explain that it is natural for an animal to hunt, and to bite a human or another animal in self-defense. We can also point out that certain bites can be harmful or fatal. Then can follow some suggestions for the identification of areas where we don't venture into, in order to leave the creatures in their habitat undisturbed and also avoid touching animals or plants that are known to be unsafe.

When children of different ages go together on these walks we notice that there is a richer sharing. Some of the discussions that follow a walk are enriched by the evolving capacity of the older children for making connections and inferences when given a set of facts. At the same time the younger students share their observations and often make it interesting with a touch of their imagination.

Young children learn best when the content that is being explored is drawn from their immediate environment. This is probably because learning at that stage is primarily sensorial. They can easily relate to things that are around them and have an innate curiosity to know more about their immediate surroundings. What if a school does not have a campus full of living things? It is always possible to find a tree or grow a plant in the home or school. A teacher can create homework activities that would encourage parents and children to observe and wonder.

In the campus of a school, many activities are possible:

- Going around the campus classifying man-made things and natural things
- Following trails on campus noticing the kinds of trails and foot-prints
- Following different paths made by the water after the rains and noticing different water levels, what the water paths tell us, and whether the water paths have been seen in the same place previously
- Listening to noises on campus: the sounds heard in different areas
- Examining the litter on campus and in the classrooms; segregating as reversible, recyclable, degradable and non-degradable and disposing them off accordingly

These activities create a context for sharper observation and critical thinking, as well. A child may sometimes come running to share a sudden sighting of many butterflies or snails. First the sharing of excitement, and then a question: 'I wonder why they have come so suddenly?' could evoke imaginative answers as well as a sharing of knowledge of seasonal changes. Herein lies the challenge for an adult—not to swamp the child with a lot of information but to share just the basic facts and keep the sense of wonder alive. It is exciting and interesting for adults to keep an eye open at all times for opportunities for learning that may present themselves at any given time and place. The thrill of a sudden discovery or a sharing between adults and children at such times means an everlasting moment of joy and connectedness.

Nature is part of our life.We grew out of the seed, the earth, and we are part of all that but we are rapidly losing the sense that we are animals like the others. Can you have a feeling for that tree? Look at it, see the beauty of it, listen to the sound it makes; be sensitive to the little plant, to the little weed, to that creeper that is growing up the wall, to the light on the leaves and the many shadows? One must be aware of all this and have that sense of communion with nature around you.You may live in a town but you do have trees here and there. A flower in the next garden may be ill-kept, crowded with weeds, but look at it, feel that you are part of all that, part of all living things. If you hurt nature you are hurting yourself.

J Krishnamurti

Reading Children: A Perspective from Poetry

Siddhartha Menon

The Truth must dazzle gradually
Or every man be blind

Emily Dickinson

Early in my Literature course with students newly come into Class 11, I have given them these lines of poetry to consider:

The apparition of these faces in the crowd;
Petals on a wet, black bough.

I ask what these lines mean to them, whether they think they constitute a poem and if so what its title might be. I find that after the initial bewilderment their responses get articulated in increasingly perceptive ways. They begin to visualize, hear and feel the texture of the objects placed so oddly together, and to perceive suggestive contrasts between them: an apparition and faces, petals and a bough; softness and hardness, or brightness and wet darkness; the transient and the fixed; the long, loose first line and the harder, more compact second one, but also the assonance that binds the two lines together. Eventually I like to reveal that it is indeed a complete poem, by Ezra Pound, and that its title is '*In a station of the Metro*'. This revelation can feel redundant: the poem has come alive by then, and its images strain against the title. Nevertheless, it does bring the poem more sharply into focus.

One purpose that this exercise serves is to experience how paying close attention to even this most cryptic piece of writing, can tease it into our consciousness. We still don't know it completely, for that is in the nature of poetry. But it is warmly familiar now and can be regarded without trepidation. By the time the course has come to an end nearly two years later and the students are sitting for their final exams, Pound's poem is a distant memory but I would hope that they have felt the value of patient attentiveness to a text, and learnt not to fret, be fearful or dismissive if it seems obscure or contrary. This is not an easy lesson and I find I have continually to re-learn it myself. Along the way I might

have suggested that meeting a text for the first time is unique because, presumably, you have few prior impressions of it or none at all. Your first responses are relatively uncluttered—their freshness mirrors that of the text. Indeed it is like meeting a person for the first time.

But what about the second, the fifth or the hundredth time? Can subsequent meetings be pristine, as the first one nearly was? Apparently they cannot: the innocence of not-knowing does not survive the first encounter. Subsequent knowledge, of course, is often richer, more subtle and nuanced than first impressions. However, it also tends to settle into grooves, where it might become hard, schematic and tend to reduce the living complexity, the mystery, of its subject. A classic, Italo Calvino tells us, never finishes saying what it has to[1]. It leaps off the pages in its three-dimensionality each time one's mind is receptive. But what keeps the mind receptive? What would prevent a text from becoming flattened by familiarity?

Analogous questions arise when we consider what it is to observe, to 'read', children. What keeps our reading fresh and engaged? What prevents it from hardening into formulaic certitudes? These are resonant questions for adults working with children. They lead us, however, to a still more basic one: why would we want to observe children?

'Children': who, or what, is it that teachers are concerned with? To answer this with a degree of authenticity is the first reason we have for learning how to 'read' children. The accumulated wisdom of experts helps us, but is no more a substitute for learning about the individual child in our care, than is expertise in poetics a substitute for looking closely at a poem. Learning how to read the individual (child, poem) is what brings us closer to the general (childhood, poetry). The primary route to this—in the case of poem or child—is close attention, simultaneous with our actions and integral to them; integral because the 'medium' we are working with is not static, and neither are we. Without this attention we would be lucky if our actions met the needs, optimally, of our children.

A second reason, then, to learn about looking at children, is to gauge how effective these actions are: to understand how children are responding to them and changing through them. Our work as teachers is only one factor influencing a child's 'development'; the web of processes that occur to varying extents outside of, not to say in spite of, our efforts. Nevertheless, we are interested in observing how they manifest in a child's life. Nor are we alone in our interest; certainly the child's parents would share it; and, though 'interest' doesn't seem quite the right term, so would the child. Further, since we observe as individuals it becomes essential to share our 'readings' with one another. There is an institutional rationale for learning how to do this effectively.

All of this has to do with our multiple roles as educators. To increase our efficacy we feel impelled to learn about looking at children. We realize that we don't know all about childhood merely by virtue of having traversed its territory ourselves[2]. There is some amnesia about what it is to be a child, and possibly an implicit assumption that children are unformed adults, delightful but incomplete, handicapped until they are formed in our image. They only need time and nurture to join the adult world as full citizens. If this sounds reductive it is worth remarking that adults tend, even with the best of intentions, to patronize children. There is so much for them to learn: mostly from us.

Valid though this assumption might be, we sometimes overlook the reverse: adults have much to learn, some of it plausibly from children. If our concern were primarily with ourselves rather than with the children in our care, it would still be worth our while to watch them.

One reason it would is that emotions, and other experiences of the 'spirit', are projected onto a large screen when we observe them in children. Since a child has developed fewer mechanisms to conceal or distort them, they are revealed more clearly and we perhaps view them more sympathetically. A child's fears or longings, for instance, would seem legitimate, whereas we might expect adults (including ourselves) to be more 'rational' and to 'outgrow' or at least to mute them. Thoughtful teachers would generally encourage the expression of children's feelings and might, surprisingly often, see their own reflected. To be reminded so nakedly that we haven't outgrown fear, self-absorption, delight or wonder can be disconcerting or exhilarating, as the case may be, but either way their undisguised expression stirs us and is a catalyst to our self-understanding.

Furthermore, children have abilities that make them adept at handling situations where adults might be clumsier. Their adaptability and their relative lack of self-consciousness, their playfulness and their lack of cynicism or prejudice, their powers of observation and of thinking laterally; the imagined worlds that they experience as real: these are qualities that enable children to engage with the world more diversely and creatively than adults tend to do.

These are generalizations whose purpose is neither to idealize children nor to denigrate adults: there are things it would be good to outgrow; children are not always exemplary and adults sometimes are. Nor is it to posit impermeable barriers between childhood and adulthood; clear distinctions, yes, but also, and more to the point, continuities. Perhaps it is curious that the traits we label 'childish' persist more strongly in adults than those we term 'childlike'. At any rate, we note that children often behave differently from adults, not simply because they are 'immature' but because they possess

qualities that tend to be attenuated over time or displaced by others. To observe this can be rewarding, for what it indicates about our own ways and for the alternatives it might reveal. Adults can learn much by 'reading children', and as teachers we are ideally placed to do so.

Though 'reading children' might seem an odd way to put it, it revives the analogy with poetry. If we were to ask ourselves how best to read poetry, a possible if faintly tautological answer is: 'poetically'. Poetry mystifies us when we forget that it inhabits a somewhat different world from prose. All too often we read poetry as if it were prose, expecting linearity in its narrative, a clear thread from problem to resolution. These expectations are natural: we are habituated to prose, which almost always relies on such organization. And yet they are usually belied by poetry, whose 'logic' is not primarily sequential but resonates as much through the simultaneities of image, rhythm and sound. To 'read' poetry is to be alert to the ways in which it works. This entails quiet attention, patience and, to a degree, a suspension of the expectations we have of prose.

The explication of poetry does rely on the qualities we ascribe to prose: we speak or write in prose about poetry. But before we do so we are called upon to respond to the poem, to experience its music and touch its mystery. We tend to rush this in our anxiety to 'know' the poem. To read a poem poetically is to remain for as long as possible in a state of sensory alertness, where conclusions are tentative or are suspended altogether: a state that replicates the quality of being, the responsiveness that produced the poem in the first place. This can be hard to do; harder still, perhaps, is to retain this quality even after we have explained the poem to the extent we are capable. The poem tends to be reduced by what we know for certain about it, because we are liable to ignore what we do not or to persuade ourselves that it does not matter. To come to a poem freshly even when we are already acquainted with it, requires a lightness in the way knowledge is held and even, if one can envisage it, a kind of forgetting.

Two further points about reading poetry, before we return to children: one is that to read poetically is to read imaginatively. A poem is a work of imagination; its weight is carried in image and metaphor, in connective leaps that help reveal its subject in unexpected ways ('Tell all the Truth but tell it slant' says Emily Dickinson in the poem quoted in the epigraph) and it does not spell these connections out. Pound's Metro poem is richly suggestive but only if one's imaginative understanding is awakened.

The second is that if there isn't a quality of delight in reading poetry, the experience is diminished. This delight is aesthetic but also arises in the moments of recognition through which a poem emerges from obscurity into sense. Bridges are formed as we begin to discover ourselves in the poem. There is considerable pleasure when

this happens (even, curiously enough, if what we discover is not pleasant). Not that it always does, however, and to persist out of a compulsive urge to 'know' the poem in an intelligible way, can be frustrating. A willingness to let things remain unknown for as long as it takes to grow into the poem, is likely to work better.

I would venture to say that these observations about the reading of poetry might be applied to the reading of children as well. If the best way to read poetry is poetically, a useful way to read children is with something of the mind and heart of a child. Children seem readily to engage with the world on its own terms and their curiosity is less directed than ours by theories or motives. Their fascination with the world enables them to learn both rapidly and continuously. To enjoy watching children, to be immersed in it for its own sake, is a prerequisite to reading children. (This is roughly analogous to suspending, at least initially, our need for paraphrasable content in a poem.) It would then become easier to read more purposively when we need to, out of the specific concerns we have as teachers. But until we are in it, until, that is, we have the patience and create the leisure to look at children without being driven to direct them or even to 'understand' them, what we see would mostly be determined by some agenda or the other. Agendas are necessary but if they come in too early or are importunate, they can stifle our response to what the senses perceive and the heart recognizes. There must be space for these to happen first and, indeed, continue to happen even after we are familiar with what we are looking at and have begun to analyze and label it. Another of Calvino's aphorisms is that each re-reading of a classic is a voyage of discovery. To what extent is this true of our reading of children?

It is also worth asking whether imagination has a role to play, as it evidently does in the reading of poetry. It certainly would seem to, because the truth that dazzles gradually is not of a linear kind. Consider, for instance, when a child's behaviour appears erratic and belies our expectations. We might be condemnatory of it, sometimes with good reason. However we might also intuit a child's inner 'workings' from it; to do so requires both generosity and imagination, for we are called upon as adults to inhabit the child's world. This is a three-dimensional world that cannot be entered through narrow pathways (rigid expectations, for instance) but can, at times, be experienced when our attention is on, or rather with, the child. If this happened without a loss of objectivity or of sympathy, we would read, as it were, from both the outside and the inside; and with, to borrow a vivid phrase, 'an affection of the senses'[3]. Clearly this applies even where behaviour

is 'normal' (and, one might add, where we read not children but adults like ourselves).

But children are not an open book (not even of poetry!) and can be adroit at concealing aspects of their lives from us. Sometimes this is revealed to us with the shock of betrayal. We wouldn't feel betrayed, however, if we kept in mind that what we are reading is complex and dynamic, and that any understanding we have is partial. To read between the lines is necessary, and if it is done with generosity it does not undermine respect for a child's right to a private life, or lives. Our knowledge of a child needs to be held gently.

This is not the foundation for a sentimental liberality that would find excuses for ugly or negligent behaviour. That would be a disservice to the child and abjure our responsibility as teachers. But if our work is to be founded on what we believe would be life enhancing rather than on institutional expediency, it entails care in our reading of children, a regard that the child senses even when we are firm.

It is worth asking, in fact, whether our role as educators comes in the way of a calm, non-judgmental looking. It might, to some extent, both because we tend to look through the prism of what is desirable (or, more commonly, of what is not) and because children are, from very early on, conscious that we are teachers. However close we believe we are to them, their behaviour does alter in our presence. The resultant distortions of the picture matter, however, only if we are under the impression that what we see is all there is. Indeed the 'distortions' are a part of the picture. Affection does not preclude assessment, with a shrewdness that is not given to suspicion and does not pry. It would be productive to see our role not as a barrier to seeing clearly but as an opportunity, and a unique one at that because, in the course of a normal day, we are so well positioned to watch children in a variety of contexts.

To read a child is to be attentive to minutiae but not to isolate them. One cannot know a poem without being alert, for instance, to each image and how it relates to other images or how it is 'foregrounded' by sound and rhythm. But one also ponders broader questions: What are the poet's feelings? What is the poem saying, if anything? Why do I feel a certain way about the poem? And one might attempt to locate the poem in a hinterland of social circumstances, politics or ideas. It goes without saying that the broad picture and the narrow are intimately related: to concentrate on one is to clarify the other, if we are interested in it. We read children in their everyday actions, but to read them with understanding we have to see their hinterland too, the diverse forces, past and present, that act upon them. The hinterland would also include prior experience, our own or others', with children and

'foregrounded' education. The more clearly we perceive each feature of the landscape, including our presence in it, the better we are equipped to understand how they are related. Part of our business is to educate ourselves about them. Not to do so is to emulate the blind men groping around their elephant, each complacent in his fragment of experience. To read a child is to read several things, not least ourselves.

Implicit in all of this, is the fact that reading children has a more informed and analytical, purposive and 'prosaic', component. This is central to our work and underlies what we say about children, orally and in writing, to each other, to parents and, indeed, to children themselves. Considerable effort goes into this in a school, and it is worth examining separately. The point, here, is that the more 'poetic' reading is equally essential, even if it isn't always conscious or articulated. This is merely to bring into focus something we have known already in our engagement with children.

Some of the rich ambiguity in Pound's poem is vested in its faces: how clearly are they seen, and for how long? Does each one stand out or do they remain undifferentiated? Children will remain no more than faces in the crowd if we are unable to read them with attention, affection and good humour; or to note, with pleasure and humility, the fragile individuality-in-sameness of each petal against the bough. If we do not blur this individuality, we might enhance it.

1 Italo Calvino: 'Why Read the Classics?' in *The Literature Machine* – Vintage 1997

2 For this observation, and much else concerning children and the act of looking, I am indebted to David MacDougall's *The Corporeal Image* – Princeton University Press 2006

3 MacDougall

The Joy of Geography

V Arun

It is quite astonishing that adults know so little of the world around them. They possess a poor subjective understanding of History and little or no understanding of Geography. Science of course is elevated to a religious height with even less understanding. After fourteen years of schooling it is quite interesting to see how little has been learnt of these school subjects by most of us.

There seems to be a divide or disconnect between what is learnt at school and real life. Everyone—well, almost everyone—has a good understanding and feel for at least the front end of the objects and equipment that he/she uses in everyday life. Yet, if one is not in control of something—the natural phenomena around us, for instance—there doesn't seem to be a need to understand. Therefore, in order to begin understanding these phenomena we need to find a connection between the real world and ourselves. In my opinion, the subject of Geography helps us connect with the world around us very well. When we engage with it seriously, it helps us to demystify the physical world around us and gain a fairly clear understanding of its workings.

I would like to share my experience of teaching Geography to Class 9 students.

Understanding longitudes and latitudes

There is much joy in learning to use the tools which will help us understand even the simple mysteries of the world around us. For instance, take the case of longitudes and latitudes which seems such a 'text-bookish' topic at first sight. Yet, an understanding of this simple concept helps us become clear about something that befuddles most adults. It is befuddling and indeed quite magical to realize that when it is summer in one part of the world it is winter elsewhere, or that the length of the day can vary from twelve hours in some places to a mere three to four hours in other places. But when we find out why it is so, it is exciting for adult and child alike. It is exciting to know that if one flies from India to the United States one gains almost a whole day and that we can lose a

day the other way around! It is as exciting to know that if we live in Alaska, close to the International Date Line, we can celebrate two Christmases or two birthdays on consecutive days by just crossing the line! All this and more can be understood and explained by studying the concept of latitudes and longitudes which are just imaginary lines created to help us solve these mysteries.

Isn't it fascinating that by merely finding out the latitude of a place we can ascertain the approximate climatic conditions there; or by knowing the longitude of a place we can find out the time difference between where we are and that place? Today with sporting events being followed all over the world, sports fans know these time differences by heart. Yet, they may not know the reason behind the difference or only have a vague notion about it.

By understanding the concept of latitudes we will see why the proverbial North Wind is much feared in the northern countries. It helps explain why there are rain forests along the Equator with such a diversity of species. It helps us understand the winds and why it rains and much else. It is indeed a profound tool in the hands of a good teacher.

Once in an atlas study class I realized with shock that Africa straddles all the three major latitude lines: the Equator, the Tropic of Cancer and the Tropic of Capricorn. When most people think of Africa what comes to their mind is the word, 'hot'! However, when we look closely we realize that countries like Morocco, Egypt and large parts of Algeria and Libya (which are north of the Tropic of Cancer) and countries like South Africa, parts of Namibia and Botswana (south of the Tropic of Capricorn) actually experience temperate climates and may even have snow-fall!

Another intriguing topic is that of seasons. What causes seasons? Why are there different seasons in different parts of the world at any given time? Why is the experience of seasons so different in different places? For instance, why is summer in Delhi so different from the summer in London or even in Chennai? Most adults seem to think that the earth is closer to the sun in summer than at other times of the year. It would be good practice here to examine the factors that cause the seasons—the rotation of the earth, the revolution of the earth around the sun, and the inclined axis of the earth. What would be the conditions if one of these factors was absent? For instance, if the earth was tilted and rotating but did not revolve around the sun, what would the condition be then? It is an interesting exercise. All permutations and combinations can be imagined, and their consequences worked out. Then one would realize that more than distance from the sun, it is the orientation of the tilted earth in relation to the sun which changes

as the earth revolves, and that this is what causes changes of season.

Studying the moon

For many years now I have begun the teaching of Class 9 Geography with observation and study of the moon and its movements with the students. We read the first chapter of the textbook which lists the great discoveries in astronomy made over the centuries. What is astonishing for us is that the discoveries were made with the crudest instruments or no instruments at all—that the mysteries of the heavenly bodies were unraveled through simple observation!

The pioneers were motivated by their curiosity and desire to understand the world around them. When they are really young all children seem to have this quality of curiosity. They often ask questions such as: Why is the night dark? Why do stars twinkle? How far away are the stars? How many stars are there? Some of these questions get answered, often in a pedantic way, at different levels of schooling. Over the years the students begin to take the 'facts' for granted and seem to lose their curiosity. I use the study of the moon to rekindle their curiosity and to help the students learn some substantial facts through their own observation.

I start by asking them where the moon rises and when. A number of possible answers are given. Most say that it rises in the night and, as for the direction, many say it rises in the West. 'The sun sets in the West and the moon rises from there,' is an oft repeated comment.

I then encourage children to observe the moon over the next few days. They need to look for the moon in the sky whenever they remember and make note of the position. Many come back over the next few days excitedly saying that they had seen the moon in the morning, afternoon or evening—as though for the first time. After a week or so of observation sustained through encouragement, the class arrives at the discovery that the moon rises at a different time every day and that it rises in the East! Some are yet not sure!

Now we try to set about learning why this is so. Several interesting simulations are possible. In one, the whole class stands and moves around in a circle. The students represent the earth moving on its axis. One person, who represents the moon, goes round this rotating circle slowly. When the earth circle has completed one round (representing one day), the moon has moved some distance from its earlier location along its orbit. In this case when student X reaches the point where he was in line with the student moon, the student moon has moved ahead. The time taken for the same point on earth to be in line with the moon again constitutes the delay in the moon rise every day.

One can arrive at this time delay (approximately) by means of some simple

mathematics. The moon takes twenty-eight days to complete one revolution. In other words it would have moved one-twenty-eighth of the distance around the earth in one day. The earth completes one rotation in twenty-four hours. The extra time that any point on the earth will take to cover this additional distance to be in line with the moon can be arrived at with some thumb rule calculations. Such exercises are of great value because they help children to rediscover 'facts' handed down from the past. While it is no doubt exciting to learn these facts anew, it also demystifies handed down concepts and beliefs.

We next move to eclipses. All we need is a dark room, balls of different sizes and a good torch light and the mystery of the eclipses can be solved by modeling the positions of the sun, earth and moon relative to each other. If one is willing to extend oneself, one can make simple contraptions to hold the light source and the ball and demonstrate different positions. Eclipses occur due to the sun, moon and the earth being in a straight line. Why every full moon and new moon is not an eclipse then needs to be taught with a little more intricacy and attention to detail.

Why are there phases of the moon? One day a few years ago while observing the moon around the time of sunset, it dawned upon me (finally!) that at any point of time half the moon is always illuminated by the sun's rays. However, we see only a sliver or increasingly larger parts of the moon due to the changing angle at which the moon is with respect to our location on earth. This is the point that needs to be taught. This can be shown both by using the above model and through the circle method used earlier.

Another intriguing fact we learn is that we only see one face of the moon always. This can't be taught through direct observation but we learn that the time taken for the moon to complete one revolution and one rotation is about the same. With a bit of visualizing we can understand why we see only one face.

If the moon rises at a different time every day does it rise sometimes with the sun and set with the sun too? The answer can be arrived at by direct observation. We find that on new moon days the moon and sun almost coincide in their rising and setting. Strangely, I haven't seen this point mentioned in any book. I still haven't been able to discover whether on full moon day the moon rises at six o'clock in the evening at most locations.

Why does the wind blow?

The other fascinating area is that of weather and climate. As much as we have studied it and with the latest technologies, weather prediction remains an elusive science. This is hardly surprising! The number of factors that decide the weather in a given place seems quite beyond human imagination and calculation. Climate on the other hand is more predictable as it follows broad patterns.

Why does the wind blow? This seems to be a question for poets who have taken the license to wax eloquent about it. But why does the wind blow? When we actually get down to teaching it, the intricacy of it initially baffles students. What we call wind is the movement of air from a region of high pressure to a region of low pressure. The differential heating by the sun causes differences in pressure in different regions. Why there is differential heating and how that leads to difference in pressure are interesting questions to go into.

There is an opportunity here to understand pressure and temperature in a real-life setting as different from studying it in the context of Chemistry. For instance, students learn that, according to the gas laws, pressure and temperature are directly proportional—which means that, when temperature increases, so does pressure. Some sharp students point this out and ask how it is that in the context of studying wind, pressure reduces when there is an increase in temperature. The difference is that when looked at in the context of Chemistry one is looking at fixed volumes or confined spaces, while here it is quite the opposite.

Then we go a little deeper. We have to explain that on heating, particles, or as in this case, molecules of air, gain kinetic energy and tend to move apart. As they move apart there is nothing to restrict them, so they keep moving until they lose their energy and cool down. In geographical terms we describe this as the rising of hot air. When hot air rises it leaves an area of relatively low pressure behind. And when a region is not getting heated or when it is cool the air molecules come closer together and they create higher pressure. Here again is an amazing facet of nature that seems to work in so many contexts—whenever there is a difference in pressure there is a force to equalize it. The same force works in plants to create osmotic pressure so critical in the movement of water and other fluids in plants. In the atmosphere the air moves from a region of higher pressure to a region of lower pressure trying to equalize it.

Here comes the next concept: that of the Coriolis Effect. It is fascinating to note that the air from the region of higher pressure never reaches the region of lower pressure, because it gets diverted. What does this imply? It implies that since the pressure will not get equalized, the air will go on moving in this direction for a very long time or in the case of local regional differences, until the conditions change.

The cause for this diversion is the force created by the high-speed rotation of the earth. It is easy to demonstrate this to students. Students love spinning things on their fingers. One can have one student spin a basketball on his or her finger and ask another student to draw a straight vertical line on it with a sketch pen. This line represents the path taken by the air from a region of high to low pressure. When the ball comes to a stop one notices the line has

curved in the opposite direction to which the ball was spinning suggesting that winds blowing in an apparently straight path too will get deflected by the rotation of the earth. This effect is named after the man who discovered it, Gaspard de Coriolis. The demonstration can be done with a flat disc or even a note book.

Thus we have regions of permanent high pressure and regions of permanent low pressure. These are called pressure belts and winds move between them all through the year. These are called permanent winds, and sailors and others have known and used these winds since time immemorial.

Making a connection with the earlier understanding of temperature and pressure, it is easy to explain that there will be a low pressure belt around the equator as it is the region which experiences the highest temperature due to the direct rays of the sun. By the same logic the poles will be the regions with the highest pressure. And yet, further complexity is introduced into this system of pressure belts by the fact that the tilted axis of the earth causes the direct rays of the sun to shift somewhat south and north of the Equator (up to the limits of the tropics of Capricorn and Cancer) as the seasons change. Hence one must visualize even the permanent winds shifting northward or southward with seasonal changes.

There are many more interesting phenomena like ocean currents and the course of rivers which one can go into in detail. My purpose in this article has been to show how joyous and enriching an experience the study of Geography can be; hence these examples should suffice.

Preparing the Ground for Meaningful Writing

Keerthi L Mukunda

As an English teacher I have found great joy in the exploration of meaningful writing with junior and middle school children. Children acquire language skills when they engage in self-motivating activities that are stimulating, social and meaning based. Writing activities, I have seen, need to be a part of the entire language experience that children are engaged in, and they cannot be isolated from what children listen to, speak about or otherwise experience. In the same spirit, writing activities must focus on communication and meaning rather than on the form of the language.

When thinking about meaningful writing, several important questions arise. How is writing to connect with children's imaginative and psychological inner worlds? Can there be a structure to the way children conceive of the writing process itself? And how is creative writing to be assessed? I will try and propose frameworks to approach these three questions in the sections that follow.

Writing personal narratives

Dear Roshan,

This is your writing journal. It is a place for you to write in either at home or at school and you will give it to me once a week. I will read it and write messages back to you!

The type of writing you will be doing in this journal is called personal narrative. That means you will write about events, stories, people and memories in your life. You will choose one topic for each entry. So, you might write about taking a train ride. Another time you might write about how you learned to blow a balloon.

This is how a letter to each of your students might begin, if you were to try personal narrative journal writing. This can be a weekly activity throughout the

year with each student maintaining his or her own journal. It is a meaningful form of communication going back and forth between teacher and student, gradually deepening the relationship between the two. What it isn't, is a place for us teachers to correct grammar, spelling, punctuation, and form. It is a place for us to respond to the feelings, events and thoughts shared by the child who is relating a particular narrative. It is, therefore, a response to content and not form.

What exactly does this activity entail? In spirit it is just like a child eagerly grabbing the teacher's attention on a Monday morning, "Uncle…do you know what happened to me this weekend? I lost my third tooth!" "Aunty, yesterday night, I and my father got lost while we were coming home…and you know what…it was more scary because the current was not there!" Our complete attention is summoned by the intensity of emotion, touch of drama, and lucid details that the child brings. Her main goal is to reach her audience successfully. While we hear ourselves saying, in our minds, "my father and I…last night…not yesterday night . . ." we respond out loud, with, "Oh gosh, really?!" or we go on to ask searching questions (if we can get a word in!) because we are genuinely interested in knowing more. What we are instinctively doing is responding to content and tone, but not form, and this is the spirit with which we would read the journal entries.

An article titled *CoreValues of Progressive Education* by Seikatsu Tsuzurikata and *Whole Language* (June 2007, International Journal of Progressive Education), by Mary and Chisato Kitagawa, gives us an insight into the significance of this simple yet fulfilling exercise. During the Great Depression of the 1930s, teachers in rural schools in Japan found the textbooks and prescribed curricula too abstract and removed from the experience of the children whose families were simply struggling to survive. The teachers finally decided to ask the children to write about their own lives and experiences in the form of journal entries. Quoting from the Kitagawas' article: *Students wrote about their hardscrabble farm life, describing their parents' toil in specific terms. For example, one student depicted his father's gnarled, soil-encrusted fingers as looking almost like the edible roots he was pulling from the ground.*

Today this approach can be used to benefit children anywhere by 'listening' to their personal stories and acknowledging their emotions. We

can do this by writing meaningful comments in the margins of these journal entry pages. Over the course of the year while these entries keep going, the teacher can do lessons in the classroom on the use of rich detail, focusing on a memorable moment (not a whole summer vacation!), and using colourful vocabulary—all the time remembering that the entries are to be retained as a special, expressive communication between teacher and student.

Keep in mind that your comments are pivotal for this to work. Children should be made to feel uninhibited, free to experiment with words and phrases, or to try out a writing voice and style. In the samples below, I highlight such language play.

Student: *It was an everyday-type day until the doorbell rang.*

Teacher: *Your phrase 'everyday-type' day even sounds monotonous. I like how it rolls off the tongue!*

S: *It was nicer than that. Made of real leather. It even smelled like leather. Like the smell of a new leather jacket. And the seems were handstitched too.*

T: *Ooooh! I can smell it as you describe it. How closely you have observed this little gift.*

S: *There were mannnnny birds on the water.*

T: *I can see how excited you were to see that many birds- 'mannny'!*

S: *I didn't know the birds names but I felt happy looking at the birds.*

T: *Isn't it funny how we always want to name what we see while we could just enjoy looking at it at that moment? How nice that you felt happy seeing them.*

S: *OK now let's go deep deep into the jungle.*

T: *What an inviting way to lead me into the next part of your story!*

S: *It was there that we heard about the Kerala rock.*

T: *Wow! I'm hooked.*

I would like to end this section with these words from the Kitagawas' article:

> *What makes this movement remarkable is the degree to which teachers succeed in making themselves trustworthy co-spectators. . .the reader can read without any other purpose than to appreciate what has been expressed.*

Writing as a process

Writing is not just an end product awaiting correction and evaluation by the teacher; it is an evolutionary process that requires teacher involvement at every stage.

Writing Conferences: Alternative to the Red Pencil by Glenda Bissex

Below are my notes as I watched a writing class.

There's a low hum and a shuffling of sheets as students settle into their little nooks in the classroom and make themselves comfortable. It is time for writing with the 10-12 year olds. For a period of two weeks or more, we have been taking a piece of writing from the stage of an idea, to making a list or holding a brainstorming session, followed by a first draft, then peer feedback, a revised draft, an editing stage and then to the final product. The children have chosen their genres (travel brochure, recipe, news article, instructions or poster). As they lean against the wall, exchange that glance with a friend, and then look at their papers, they are getting ready for their task in the process of writing their piece.

For a few it is the final stage of writing out that recipe they've tried at home. Two others, at the stage of revising their first drafts, go outside to read their pieces out to each other. They will follow that with searching questions and feedback, which will nudge the other into making changes and revising the draft. They will read it out instead of showing it, so that the listener can focus on content and not get distracted by editing errors or handwriting quirks! Most of the students this morning are still navigating through their first drafts—an exciting stage of expression where they can dream about how they want to reach that final product—a colourful, flashy brochure about Savandurga Hill, perhaps. They can also freely put down all they want to say and in the way they want to, knowing they'll be able to go back to it and reshape it. Since each student has chosen his or her own genre and topic they are quite motivated today as we settle down and proceed.

Rukmini has been painstakingly folding and refolding an origami crane making sure she writes down the instructions correctly. Finally she comes to me with a brainwave,

"Aunty! Now don't worry, I will also write how to make the crane but can I stick an actual paper at each step, with the correct folds, so that whoever reads it can see exactly how to fold it?" Over the last few days, she has discovered how complex it is to write about and draw out instructions for the folding of an origami crane, but she seems to have found a way out! As I look around, there are two students missing and I remember that they are off interviewing staff members for a news article. They should be back presently with their notes.

Suddenly I sense a queue of students developing on my right. Some need help in editing, one is not clear what to do next, and one who is writing a novel from the perspective of a dog which lives on Savandurga Hill, is feeling stuck with no creative juices flowing today! If there are too many waiting for help I usually urge them to: start designing the layout of their final product, read a library book, or see if a classmate needs help with their piece—sketching or decorating.

A couple of minutes before the end we all gather. I have to go up to the balcony to make sure I have found everyone! The hum turns into giggles and loud exchanges. The students pull out the sheets on which they are tracking the stages of their writing process. They take a minute to report, in writing, what happened that day:

- *'DONE!!!'*
- *'Couldn't think of anything new for my novel.'*
- *'Shanti listened to my story and said it was nice.'*

Maybe this is a moment for me to write down some observations as well:

- *'Varun struggled to begin working independently and is not able to get the big idea of the process. Perhaps this is too open-ended an activity for her.'*
- *'Shalom has already reached a final—seems to be rushing in most activities.'*
- *'Shreya has grasped the importance of revision, and wrote notes for herself when Rahul gave feedback and asked questions.'*

My notes are of what I have noticed today. As I sit and look through all their writing process tracking sheets later, I will realize the need to instruct the class more in certain areas, such as how to listen and give constructive feedback to your partner (not just say, 'it was nice'), how to incorporate their ideas and actually make changes in the first drafts, and so on.

As a parallel to the vignette above, I could trace my own journey in writing this article. I first brainstormed ideas I wanted to include, wrote a rough draft to just pour sentences onto the page without worrying about exactly how it sounded, then shared it with a colleague who gave me some feedback. A few days later, I went back to it, made changes in paragraph format, took away unnecessary details, added some necessary ones, and then began to think of my audience (you!) more seriously. Finally I was ready to edit for spellings, grammar, sentence structure, and punctuation. It was only after that that I felt it was a finished product that could be presented in some way.

The belief that children are authors capable of taking decisions, like adults, forms the core of this approach to writing. In this scenario, writing is real, not just an essay in response to a prompt, or an answer to a question. It is a living thing that has a meaningful end: reading out one's story to a younger group of children, giving copies of one's recipe to others in the group to try out, displaying the travel brochures in the library, putting up posters for publicity and such like. In the younger classes when children are not as familiar with many different genres of writing, the whole group can be led through an exploration of one genre—news article, for instance—and while all the children write the article they can choose what topics to write about. As older children are more familiar with different genres of writing they can choose to work on one for a couple of weeks as described in the vignette above, and move through the steps. Over the course of the year, you can make sure they cover five or six different genres. Exactly when they do each one could be up to them.

How do we understand the revision step? When we are immersed in a first draft for a while, it becomes very hard to step back and see if it reads well, is clear and performs its function. We have become too close to it. Reading it out to someone helps us hear it better and allows for the natural process of questioning and feedback to emerge. Here are examples of what teachers and peers might ask:

- Who do you mean by 'she'?
- Is this a few days later or on the same day?
- You have used the word 'good' quite a lot.
- I would like to know more about the bull that came towards you and your friends, rather than the restaurant.
- Why do you say you will never forget that day?

It is most effective for the teachers to role play this type of interaction (perhaps at the start of the year) so that students see how to give feedback, what questions to ask, how to be respectful of the piece written, and how to listen and wait till the end. Here are some more general questions for the listener to ponder over:

1. What was the best part and why?
2. What was difficult to understand and how can it be changed?
3. What was the writer's main point?
4. What do you want to know more about?
5. Did the piece fit its purpose?

Putting the responsibility back into the writer's hands and making him/her active in deciding how to change, add to, or rephrase the piece conveys a powerful message of trust, and gives the student confidence in his/her writing abilities and talents. It is also a shift in perspective: moving the focus away from the mistakes themselves to that of making constructive changes and revising the writing.

A tool for assessment

- There were hundreds of birds flying over our heads!
- It's a fact that giraffes have killed predators by a single kick of their hind leg and have also fallen on predators and crushed them!
- It was not that Omri didn't appreciate Patrick's birthday present to him.
- No more tips for today. Read tomorrow's paper for more tips. (A 'tips for dogs' piece)
- That's all. Why are you just sitting there? Get out of your comfy armchair and go play the game! (The conclusion to an essay on football)
- Not being able to fit in? People not understanding what you say? Come to St. Rajappa's Gibberish School!
- He served it to the king's guests. ' "Wonderful!" they remarked. "What do you call it?" The cook thought for a while and said, "Avial…" And thus the famous dish was born.

When we read a piece of writing we may feel it speaks to us, makes us laugh, entertains us, leaves us wondering about something, or gives us important information. On the other hand, we may feel it makes us confused, leads us down many paths, doesn't have a main point, or is misleading. This gut reaction we have is valid, but as teachers we need to also understand the exact reasons that make the piece 'good' or 'bad', effective or not. These reasons give us teachers the language necessary to describe the strengths and needs we see in children's writing, and clarity about how to teach to that or to move forward.

Vicki Spandel, an educator from the USA, has created a program titled '6-Trait Writing Assessment and Instruction'. Essentially this type of assessment is a rubric or grid comprising six traits that all writing can possess:

1. ideas
2. organization
3. sentence fluency
4. voice
5. word choice
6. conventions (capitals, punctuation and spelling)

The student self-assessment table shown expands on these. Students are exposed to literary extracts or anonymous samples of children's writing that are strong or weak examples of each trait until they begin to understand the nature of that trait. For them to appreciate what an effective detail, a personal voice, a strong lead, rich vocabulary and sentence fluency actually sounds or looks like, they need to read and hear examples and understand for themselves. Finally, after weeks of assessing other works, they can apply it to their own and each other's writing. This assessment tool can be used once in a while at the revision stage (instead of the peer feedback process) so that students can go back and fix or improve their pieces and then apply it again at the very end of their writing process.

Here is an example of how the rubric can be applied. One child's sample reads thus:

A Talk by the Dalai Lama

As the rain pours down on the parched earth, people run out to enjoy the earthen smell and when the rain trickles down their foreheads, the farmers pray for a good harvest. At last the monsoons have come. Although some people don't feel so much happiness as they ride on a motorbike. For instance it happened to me yesterday when I was going to a talk by the Dalai Lama.

The essay ends with this: *So that is why I missed a wonderful talk…because of the rain!*

This is a piece that has:

- an interesting lead, setting the scene for something to come
- memorable and poetic word choice: 'parched', 'earthen', 'trickles'
- sensory details that create a scene: 'rain trickling', 'earthen smell'
- varied sentence structure
- clarity in format
- a personal voice: reaching out in that last line.

All these specifics can be entered into the rubric and one will immediately see where the strengths and needs lie. Another sample reads:

Last year, we went on a vacation and we had a wonderful time. The weather was sunny and warm and there was lots to do, so we were never bored. My brother and I swam and also hiked in the woods. When we got tired of that we just ate and had a wonderful time.

It ends with: I hope we will go back again next year for more fun than we had this year.

This is a piece that has:

- organization and control, a clear beginning, middle and end
- good spellings and editing symbols, easy for another to read aloud
- no eye-catching details or strong lead
- repetitive vocabulary, 'wonderful' and very common words: 'lots' and 'fun'
- lack of build up to one peak event, just a rambling list of things done on a long vacation

- lack of personal voice (no particular person comes to mind as we read it)

In each of the trait categories we can have a scale of 1-3 as the table shows. A '1' could represent a weak example in that category and a '3' could indicate a strong example. Just like children seem to enjoy rating movies they have seen or books they have read, they seem to find this exercise enjoyable as well.

The same form is used by the teacher to assess the students' writing. When the student, her teacher and maybe even a third person are able to evaluate a piece of writing in the same manner by using this form, it indicates an effective use of the rubric. Having put thought and care into our writing instruction, it is appropriate to find a form for assessment that can match it. I believe this type of assessment helps derive children's strengths, highlights their needs, and gives us the information we need to improve our instruction.

Student Self Assessment Form

IDEAS	**1**	**2**	**3**
My message is clear.			
I know a lot about this topic.			
I have included enough information.			
I have included details not everyone would think of.			
My writing has a purpose.			
Once you start reading you will not want to stop.			

ORGANIZATION	**1**	**2**	**3**
My opening line hooks you!			
Everything ties together.			
It builds to the good parts.			
You can follow it easily.			
The ending works well and makes you think.			

VOICE	**1**	**2**	**3**
My tone and voice are right for this topic and audience.			
This sounds like me and no one else.			
This piece shares my feelings about the topic			
It makes the reader laugh, smile, get the chills, etc.			
It's like I am having a conversation with the reader.			

WORD CHOICE	1	2	3
It creates word pictures.			
Wording is accurate and crystal clear.			
These are strong verbs.			
Words are not repeated often—only for effect.			
These are memorable moments and wording or phrasing that stays in the reader's mind.			

SENTENCE FLUENCY	1	2	3
It is easy to read aloud and it flows well.			
The sentences vary in length and structure making it easy-on-the-ear.			
The tense–past, present, future–is consistent throughout.			
The sentences are all grammatically correct.			
A few sentence fragments are used for style and effect.			

CONVENTIONS	1	2	3
It looks neat, edited, polished and mostly free of distracting errors (capitals, punctuation, grammar).			
My design and presentation draw the reader to the main points.			

Note:All quotes and children's samples have been taken from classes held at Centre For Learning, Bangalore and adapted slightly for this article. Names have been changed.

Self-directed Learning in Mathematics

Applying Krishnamurti in everyday classroom practice

Tanuj Shah

The purpose, the aim and drive of these schools is to equip the child with the most excellent technological proficiency so that the student may function with clarity and efficiency in the modern world. A far more important purpose than this is to create the right climate and environment so that the children may develop fully as complete human beings. This means giving the child the opportunity to flower in goodness so that he or she is rightly related to people, things and ideas, to the whole of life. . .

J.Krishnamurti

The challenge of creating well-integrated human beings spurs educators in the Krishnamurti schools to constantly churn over questions such as what to teach and how to teach. In particular the dual aim of creating a well thought-out, well-designed curriculum that stretches the cognitive capacities to their potential, while simultaneously creating a space for the mind to remain reflective and be rightly related in the sense indicated above, poses a conundrum.

Over the last few years we have attempted to explore these issues in a more focused manner in our junior and middle school. We started with questions like: 'How does one nurture a genuine atmosphere of learning?' 'How does one bring about a quality of attention in the classroom?' 'How can we make students take ownership of their learning?' 'How do children actually learn?' 'What is the nature and quality of student-teacher interaction in the classroom?' 'What prevents someone from learning?'

In this article I will outline an attempt to respond to some of the above questions in a Class 5 Mathematics classroom.

There was a certain amount of discontent with the traditional mode of delivering Mathematics instruction where the teacher introduces the topic,

works out some examples, and then gets the students to do some similar problems. It didn't seem to leave the teacher with much space to observe students closely, and created an artificial pressure on students to keep up with the class pace (especially for the slower ones) and at times encouraged a competitive spirit among the quicker ones. The sequential nature of explanations also resulted in some students losing the thread (either because they had been day dreaming or due to other distractions), and then finding it difficult to pick up the explanation at a different point. In fact in some ways this mode of teaching did not take sufficient account of the children's natural disposition towards constructing their own understanding and making their own discoveries. So the real question for us was how to tap into the children's own drive and curiosity, and let that be the motor for their learning.

The Class 5 Mathematics programme

The Class 5 Mathematics programme starts with a story of a brother and sister who get lost in a forest and encounter various characters that help them find their way back, but only after solving dilemmas and puzzles posed by these characters. This is used as a diagnostic tool in a non-threatening context; and at the same time it builds up a picture of what Mathematics is about in its widest sense. Some short-cuts in Mathematics, for example the '999 trick', come across as pure magic. The beautiful patterns in the Chinese triangle (also known as Pascal's triangle) naturally demonstrate the addition patterns of odd and even numbers. Students encounter the recursive procedure in the 'missionaries and cannibal' river-crossing problem. The need for the commutative law comes across in the magic squares and triangles. The understanding of place value is reinforced through a problem involving census of the king's soldiers as well as 'octopus' addition (using base 8). The intention is to loosen up the minds of the children and challenge some of their notions about what Mathematics entails. Apart from enthusing the children and getting them inspired, it is important to give them a wide perspective as well as some experience of how real mathematicians work—where they pose their own questions and pursue different lines of enquiry, each line of enquiry raising further questions. They can then feel the joy experienced in discovering unexpected patterns and the frustrations encountered when coming across a dead end.

The rest of the curriculum is divided into four 'self-learning modules'—there being two weeks of teacher-led classes in between each module. The

modules are largely based on a set of SMP (School Mathematics Project) booklets, along with supplementary material drawn from other sources. Also during the self-learning modules, there is one class a week set aside for whole class teaching—this could be used for clarifying frequently asked doubts, or for attempting something entirely different like an investigation or a thinking problem.

A template for one such module is given in the box in the next section. Its components are explained, while the curriculum and pedagogic approach, as well as shifts in the student's and teacher's roles are discussed later.

Design of the curriculum

The curriculum is broken up into smaller components: conceptual play, skill building, problem solving (application of concepts and real-life problem solving where assumptions have to be stated and information required to be identified), investigations and mental maths. Mental maths, the ability to calculate quickly with small numbers, together with an ability to make good estimates when dealing with larger numbers, has been identified as an important pre-requisite for improving computational accuracy.

A wide variety of topics are covered, some of which tend to get neglected in a traditional Mathematics curriculum. This includes, for instance, visual/spatial development through model making, visualizing perspectives and orientations. The first section of each module is based on playing around with concepts, with plenty of hands-on material to facilitate this, as well as games to reinforce the concept. The concepts are coded into red for number concepts, blue for shape and space concepts and green for mensuration and pre-algebra concepts. This is followed by a mental maths component, where children practise memorising basic facts for the four operations and other important number facts. The skill building part develops computational skills and simple applications of concepts learned. Then there are teacher cards, which—depending on the need of the student—could contain enrichment work covering some new areas of study (e.g. networks), puzzles, problem solving and investigations or reinforcing basic skills through patterns and investigations. A student moves between these activities in a certain sequence, for example he chooses and works on a 'red concept', then does a review, followed by mental maths, skill cards and teacher cards, which completes one cycle. In the next cycle a different coloured concept would be chosen. Within

the same module, concepts are independent of each other and therefore can be tackled in any order.

Class 5 Maths Self-Learning: Module 2

Red	**Whole Numbers 6 Questions D to F** Started: Completed: Review: Q6 -17	**Starting Fractions 2** Started: Completed: Review: Take it away:	**Decimals 1** Worksheet: 1-8 Started: Completed: Review:
Blue	**Shapes and Shape Fitting** Worksheets: 1-2, 1-3, 1-4, 1-5, 1-6, 1-7 Started: Completed: Review:	**Three Dimensions 1** Started: Completed: Review:	**Angle 1** Started: Completed: Review:
Green	**Maps, Plans and Grids** Worksheet: 1-1 Started: Completed: Review: Grid lines:	**About a Metre** Started: Completed:	

Mental Maths	
Addition facts	
Subtraction	
Multiplication tables	
Division	

Skills Cards			
Card 1	Card 2	Card 3	Card 4
Card 5	Card 6	Card 7	Card 8

Teacher cards	
Investigation	
Problem solving	
Enrichment	
Puzzles	
Games	

Self-directed learning

The whole programme is structured so as to give students more responsibility and ownership of their learning. They are given a template (such as the one in the box) at the beginning of each module, and have some choice in the order in which they work on the various topics. This gives them a sense of being in charge of their learning. Materials required for the module are displayed around the classroom and students are free to pick up whatever materials they need. At the end of the class everything is put back in its right place. Students also have to take initiative to clarify their doubts when they are unable to understand any aspect. Unlike in the teacher-led classes, where the confident and vociferous dominate the proceedings, using this structure, those who require more attention from the teacher are provided with more teacher support (not necessarily just those who come for clarification quickly—since some of them may not have read the instructions properly). A teacher is not required to start the class and it is often the case that the students have already begun working before the teacher has entered the room. If classes are missed, it is easy to pick up from where the student left off. The teacher no longer provides the yardstick for their progress, and students soon start looking at their own progress more keenly. All this, of course, doesn't happen at one shot and initially many discussions on the intentions of the programme are conducted with the students as this is the first time students may have been asked to think in such a way. However, because they begin to enjoy this particular way of

working they are quite receptive and willing to reflect on their actions. The time period for the module is stated at the beginning and is kept fairly generous even for the slower ones, while the pace of the quicker ones is modulated with the more challenging teacher cards. There is also an option to take some of the work home to complete.

The teacher-led classes are used to expand on some of the finer points, clarify frequent doubts (though some children may not yet have finished with that particular topic , this exercise may still be carried out in a way where everyone understands the problem), tie up seemingly different ideas and sometimes introduce investigations not connected with any particular topic.

The spiraling curriculum

The curriculum is designed in a spiraling manner—one part of the concept is done at a time and then revisited, and given a slight twist and complexity at each succeeding level—as opposed to completing one topic fully and then moving to the next. Understanding is something that grows the more one revisits the concept, and becomes firmer when approached through different angles. Initially it is good to start with an intuitive understanding, deepen it with playing around and discovering connections and only then formalize it through rules and algorithms. For example, the topic of decimals is first intuitively approached through breaking a whole into ten parts through measurement in centimetres and millimetres, and through a fraction of ten parts. Formal notations are then introduced and consolidated through a game, where the idea of one and one point zero being equal is reinforced. In the second module, an intuitive idea of *hundredths* is introduced through money, and ideas on decimals through measurement are further explored by comparing heights. The teacher-led classes are used to tie up the ideas of *tenths* and *hundredths* in the decimal system and the magnitude of these numbers is brought alive through some visual displays. In this manner the whole concept of decimals is developed and the final module ends by exploring multiplication and division by powers of ten, introducing an intuitive sense of decimal multiplication and division which the students will actually encounter in Class 6. Similarly the topic of solid shapes is explored through faces using 2 D shapes, edges represented by straws with connectors in 3-D models, as well as perspective views.

Some practical points:

- If the class is bigger than 20 a support teacher may be required.
- A teacher needs to be familiar with the materials as varied demands are made within a class.

- Organizing materials well, to enable easy access is important.
- The teacher should have a view of all the children and even engage those who do not make much demand on teacher time.
- There is an inbuilt flexibility in the system to vary the approach and sometimes modules can be collapsed, some work can be omitted, and more teacher-led classes can be introduced depending on the needs of a particular batch.

Creating an atmosphere of learning

Breaking up the classroom into sections with different children working on topics of their choice creates a very different ambience from a class where everyone is expected to be doing the same work. There is a release from the implicit expectation of having to keep up with the others, veering them away from comparing and using their peers as yardsticks for their growth/sense of success. The non-linear format of the programme, reviews attempted individually, and judicious use of teacher cards—all of this helps in making it difficult for the students to compare themselves with their peers. The structure is also able to deal effectively with difference in pace and ability, with those requiring further support being given specific teacher cards without the students realizing that this is what is being done.

The teacher-led discussions are also more effective; the starting point for these is drawn from the work the students have done, thus creating a more 'level playing field' which encourages even the quieter ones to be more participative. Moving from one type of thinking to another—number work to shape and space to spotting patterns in sequences—keeps the mind more alert and attentive and reduces the possibility for becoming habituated and mechanical.

Most significantly, since it is now the student who is directing her own learning, it is possible to develop a relationship of deep trust with the teacher which is independent of the student's capacities or inclination in the subject. This non-judgemental way of relating is important in overcoming a child's fear of the subject, and encourages her to take risks and try out new methods.

Observing the child

The 'looseness' in the structure allows the students to be more natural in their behaviour, and enables the teacher to observe them at leisure, yet fully. Their interests, inclinations, fears, need to please the teacher, all come to the fore and provide opportunities to reflect on and observe these tendencies together with the

child. Those who have relied on the teacher or their peers to gauge their progress, initially find it difficult to adjust to this new way of working. The acknowledgement and the reward come from the enjoyment one gets from the work. Sometimes the blocks to their learning are removed gradually, sometimes it is quick. The intention is to help the students develop the right relationship with the subject, the teacher and with their peers.

Assessment and feedback

The concepts are mainly developed through the SMP booklets, and answer booklets are available for students to correct their own work. If they have made any errors, they are encouraged to first try and correct them on their own, while if they have difficulties in understanding they seek help from the teacher. Once they are satisfied that they have understood the booklet well, they then attempt the review, which is corrected by the teacher (outside class time). The corrections from this review could reveal different aspects of an individual—a tendency to rush through the work, not knowing when to ask for assistance and in some rare cases dishonesty (having skipped some chunk of work)—this becomes an entry point for exploring the student's attitude towards learning. This kind of space is available since the students are working independently, and only making a demand on the teacher's time when they encounter some difficulties. Sometimes it also becomes evident that a student is not ready to grasp a concept; because of the spiraling nature of the curriculum she has the chance to wait till the next module to pick up the concept. The skills cards and the teacher's cards are also corrected by the teacher. The corrections are not too onerous as each day there would be only five or six pieces to correct as the children are working at different things. The students track their own progress by getting their template signed when they complete an activity. The teacher is able to get a more nuanced understanding of the student, either in terms of the development of a concept across the modules or in terms of identifying areas that require help e.g. mental maths, computational skills, applying concepts, problem solving, investigative work, pattern spotting, spatial awareness, confidence with hands-on-work and such like.

Conclusion

Our experience leads us to believe that learning of concepts and skills, and observing the movement of one's mind, need not be mutually exclusive, and a space can be created for both. However, the role of the teacher is quite crucial, and needs to be redefined in some significant ways. There is a need for the teacher to be alert to the movement of his/her own mind; a lot of insecurities might come to the fore when yielding control of the learning process to the students. The need

to be in charge and in control of the proceedings may come in the way of objective observations. Weaning children away from teacher dependency is not easy, as the teacher may also get some pleasure from it. Then there is the genuine fear of not being able to develop a relationship with the student without the subject as an intermediary. Also, there is now a greater responsibility in terms of being alert and observing keenly. Attention, in whichever way one teaches, is essential; through this method, space is created for attention to take root.

What are Children Learning From Us?

Editors

There are indeed many things that we consciously teach children, both at home and at school. But are we aware that, even as we navigate our way through the changing urban landscapes of today, there are messages that children unconsciously get from us and our daily behaviour? Might we not be communicating so much else through our passive acceptance of the 'way things are' or by our apparent endorsement of a way of life that is fast becoming the consensual mode of thinking for middle class India? Everyday examples of this are powerful, yet we may hardly realize that our small daily reactions, our little dilemmas and fights, are related to the larger picture of violence that we readily condemn.

It is nine in the morning on a weekday, and you are driving down a busy street in Bangalore. All around you press numerous other vehicles, jostling for space and looking for the merest hint of an advantage. Every passenger is in a tearing hurry to get somewhere—now. You reach a traffic junction and stop at the red signal, watching the countdown (around a minute's wait). When there are twelve seconds remaining, drivers turn restive, begin honking, and start

inching ahead. If you are foolish enough to stay in one place till the light turns green, you are roundly abused. Meanwhile, traffic moving in other directions shows no signs of stopping for their own red light! Thus when your light does turn green, they are still blissfully driving past, leaving you to either wait and be honked out of existence, or join the complete chaos in the intersection. Often, this scenario ends in a 'jam'. In the back seats of several of the vehicles sit young children, watching and unconsciously absorbing all this. Most adults seem to be saying, 'The road is for me. Why should I tolerate any barrier?' Far from cooperating, they are impatient and callous, and contemptuous of those foolhardy few who would like to abide by the rule of the road. It is every man for himself out there, and this is what the children see.

It is evening, and you are relaxing in front of the television. There are several stories about people, or rather, about Personalities with a capital P. Sports persons and actors appear larger than life, presented to us as perfect people whose every action and experience is somehow exciting and meaningful. Surely, they have a special skill or accomplishment which we can all admire. But the media describes their personal lives and habits more than the skill or quality that made them famous. In these stories, money, glamour and success are made all-important. Their excesses give you a false sense of reality—a pair of golden shoes, a twenty-five-lakh-rupee ball, a six-million-rupee gun. Can you forget so easily that you are living in a country with so many poor and hungry millions? Maybe you tire of the television and decide to take a walk. Outside, you are surrounded by huge billboards plastered with the pictures of the same celebrities. They seem happier than the average person, fundamentally different from you and me. Now think of children who are exposed to all this almost as much as you are. They are quick to pick up role models (How lucky she is! I wish I could be like her!), and if they cannot emulate skill, they will imitate superficialities. Money and fame are the measure of all things; that much the children can see. They also see that when the icon falls from his exalted position, the media rushes to condemn him, eager to expose the salacious details of his fall. From all this drama,

children pick up an unhealthy curiosity, a vicarious need to live any life other than their own.

Another monstrously large commercial complex has just cropped up in the neighbourhood, another place promising new heights of shopping joy. You thought there were already as many of them around as could possibly be needed, but no, it looks like we needed one more! Remember how packed and crowded the nearby mall was the last time you went? You were silently cursing the jostling crowd while pondering over whether or not to buy that particular expensive gizmo for your daughter, and decided finally that you could not afford it. At first glance, 'If I can afford it, I will buy it,' seems to be a reasonable decision-making strategy. It seems that desires must be gratified, and no parent would like to refuse their child what she wants. Even worse, if she does not get used to the latest gadget, she will get 'left behind'. And there is pride in watching your child master every new technological marvel. Small wonder then that some things are becoming more and more commonplace: the child with the mobile phone, iPod on a school trip, the birthday party at a five-star hotel, the inevitable 'day at the mall'. It is easy to buy pleasure by buying things. In the process, are not children unconsciously absorbing the message that buying pleasure will bring lasting happiness and emotional well-being?

At breakfast the other day, you noticed a curious claim on the cereal box. Eat this cereal, it said, and stay smart, stay ahead of the others. So the next time you went to the store, you read some of the labels on these children's food items. An interesting phenomenon: several of them promise better attention, better concentration, better memory, better thinking power, in other words better performance in school! Which one would you buy for your child? But these messages are not-so-subtly underlined with the powerful message—feed

your child this so he can be better than the rest. How is this possible? Even if everyone in your child's class ate and drank the same wonder product, they cannot all stay ahead. There have to be losers, and this is the central feature of competition. It sets children up for disappointment, and also for the feeling that if they do not win, they do not count. The phenomenon continues into higher education and career seeking. Courses and diplomas routinely seduce young people into wanting to be in the top few. Adult endorsement of the feeling of one-upmanship is loud and clear, and our children are listening. They learn that their worth lies in outdoing others. In the worst scenario, 'others' become just people to be outdone.

You hear your friends and neighbours say: 'My nine-year-old can read books appropriate for children five years older', 'My thirteen-year-old loves the occasional sip of vodka', 'My eight-year-old already has strong opinions: she knows what she likes and doesn't like', 'I give my fourteen-year-old son the wheel and he already knows how to drive!', 'My six-year-old is wearing a backless strappy gown—isn't she cute?' Children, or mini-adults—is there a difference anymore? Are many adults intent on pushing children into adulthood as soon as possible? One trend that fascinates and horrifies at the same time is the children's song or dance competition on television, filled with adult themes, styles and gestures. Catapulting the child into the adult world and roles distorts childhood, a unique stage of life with its own legitimate experiences. Are children learning from all this and from our impatience that the sooner they grow up, the better?

You skim down the newspaper headlines, or surf the news channels, in order to be an 'informed citizen'. Disasters, terrorist attacks, and crises of all sorts—political, financial or environmental—are juxtaposed with news about celebrities and the trivia of their lives and achievements. The media mill

throws at you selected fragments of the world in random order, interspersed with glossy advertisements that can scarcely be distinguished from the format of the news items. You have a gut-level response to stories of suffering, but you are so bombarded with these contradictions that there is no space to unravel the deeper connections between the everyday textures of contemporary life and the violence at large. Children are glancing at these news stories, too. Do they end up responding with indifference to the difficult and ugly images, and prefer the 'bright and glitzy' ones?

These are but a few sample scenarios from a whole host of daily experiences that we and our children might be subject to, and which inevitably shape our thinking and attitudes. As parents and teachers, we need to become more conscious not only of what we teach or tell our children, but of the other ways in which they might in fact be getting 'educated'. This powerful, subtle 'education' of the old and the young might be happening through our unthinking responses to situations such as those outlined above. The contradictions that we see outwardly are very likely contradictions that are seeded within, and that remain unexamined in the conduct of our own daily lives.

It is surely important then to pay attention to the 'little' disturbances and dilemmas we experience daily as we navigate the veritable minefield of contemporary life. The inward space to stop and observe, to question and think, is the 'crack' through which we might perceive the connections between the acts of everyday life and the proliferation of violence around us. And if we see our hesitant or unthinking reactions for what they are, can we not find a wholesome response capable of guiding our choices and lifestyles, of shaping a more critical relationship with the media and the marketplace?

Our children might then absorb a more reflective stance to the world they find themselves immersed in and, rather than adopt manufactured meanings, learn to look within to find their own creative responses.

Democracy in Education: An Exploration of Structure

N Venu

Poor effectiveness and quality plague our school system. Learners are, in most cases, led through pre-packaged curricula. These are 'delivered' mechanically by teachers who have very little freedom to modify the content or the classroom environment in any significant manner. Both the student and the teacher seem to suffer from a severe lack of autonomy. This lack of autonomy is rarely acknowledged as a potential factor contributing to poor learning outcomes.

The teacher has traditionally been part of a vertical pyramid of authority with her at the bottom and the headmaster at the top. This structure is replicated in the classroom, where the teacher is the unitary authority. In government school systems there is another layer of organization where headmasters are fitted into a larger structure that consists of superintendents, educational officers of districts and so on.

I would like to argue, in this essay, that we need to devote considerable attention and research to explore alternatives to the present arrangements. Much time and ink have gone into exploring new curricula and pedagogy. Yet a new curriculum, however innovative, may achieve poor results if the structure of the classroom and the school remains unchanged. I would like to make the case for change, and follow that up by looking at alternatives to the present arrangements, briefly considering their pros and cons.

The case for change

It has long been recognized that the way an organization is structured significantly influences the nature of the relationships in it, as also its capacity to achieve its goals. A lot of research effort has gone into correlating structures with different degrees of effectiveness and discovering the 'ideal' structure for a given task. Business organizations have been particularly interested in this question. They would like to reorganize in ways that would enhance effectiveness, both in achieving results (most often higher productivity and profitability) and in being better prepared to respond to a changing business environment.

The same concern with structure seems curiously absent in discussions about educational institutions. In India, these continue to be traditionally structured; little has changed in a century or more. Does this mean that we have discovered the ideal arrangements? Or could it be that too little research and reflection have happened in this realm? I believe that the latter is the case. I would like to make the case for change by looking at two important factors that impact the learning process.

- Effective communication and feedback
- Power and authority in the relationships at school

Effectiveness of learning critically depends on free flow of information, in both directions, from the learner and the teacher, in the classroom and in the 'staff room'. Traditionally the teacher has been the source of information and knowledge, and this is supposed to be 'imparted' to the student. We have a more sophisticated view of learning today. It is now widely understood that the 'imparting' model of learning needs radical revision. However, this new understanding cannot be actualized without changing the structure of the classroom and the school.

Traditionally the teacher enjoyed unbridled authority in the classroom. Corporal punishment was common. In many schools in the country the situation is not very different to this day. The learner's freedom to question the teacher is severely circumscribed. Obviously all talk of 'educating for understanding' is a distant dream as long as the student and the teacher are locked in such a relationship.

Unfortunately, the situation of the teacher is inverted as soon as she leaves the classroom. She is as powerless outside as her students are within. It is not an exaggeration to say that the role of the teacher in the Indian school has been, to a great degree, reduced to that of a worker in the assembly line. Teachers hardly play a role in curriculum development or in the management of schools. The army model of structure with an inflexible chain of command seems to be the norm. The examination system, with its emphasis on rote learning, has very little use for an autonomous, proactive teacher.

The end result of all this is loss of creativity and understanding.

Two clarifications

At this point, my use of the terms democracy and structure may need to be clarified before we go forward. The dominant meaning of democracy is the idea of elected, representative governance. I use the term more generally and in a less restricted way than this implies. Democracy, in our context, is an attempt to loosen the notion of power and authority in learning environments, so that the learning process is more sensitive to the needs of the participants.

The idea of structure is more difficult to nail down. There are many invariant features of groups and organizations that have a strong impact on their working. Many of these are tangible; some are not. For example, the physical organization of the classroom and the very architecture of the school buildings are important structural features. And in a different sense, the hierarchy of the school and the perception of the teacher's role define the structure in an important way. The difficulty, you will recognize, is that features of structure and 'process' are not easily separated. They are mutually reinforcing and often intertwined. Still the notion of structure is quite useful and can definitely lead the way to meaningful interventions.

What needs to change?

I would like to focus on three frames that need to be targeted.

Firstly, teachers have to learn the art of engaging with problems that are now thought to be beyond their grasp. The teacher and the teacher-community must have a greater role in the tasks of education that are considered the realm of experts. Governance of schools and design of curricula, for instance, are central to a teacher's calling but are often held by specialist administrators and educational experts.

Secondly, the teacher's expectations and attitudes have to alter radically. She has to be prepared to meet challenges to her authority, both in subject content and 'discipline'. Thus, under what might be difficult circumstances, she has to strengthen her capacity to relate with students.

Finally, the student's own expectations and responses must change. The student needs to be 'helped' to expect a more open and less authoritarian classroom experience. This would need the co-operation of school authorities, families and teachers themselves. It is only in such an environment that easier, two-way communication can flourish.

I would like to reiterate that changes in structure cannot bring about changed outcomes automatically. They have to be accompanied by new expectations, practices and capacities. And tenacity! Here are some ideas for further discussion:

- Not by fiat alone. Administrators and other authorities in the system have to be willing to participate and see the logic of the change and the potential for greater effectiveness. So decentralization of school administration has to be accompanied by creating the capacities in teachers, for instance, in planning flexible curricula.
- Teachers may feel threatened by a (relative) loss of authority in the classroom. A more confident teacher (both in terms of

knowledge and in relationships) will be better prepared to 'cede' authority to students, encouraging them to ask questions or to challenge answers. This may have to be strengthened by a series of orientation exercises and exposures where the teacher gets a taste of what to expect from a more open classroom.

- The student's capacity to take advantage of a more open structure may have to be built from the ground up. Students used for years to 'taking notes' may themselves resist change. A transition from receiving knowledge to creating it will need adults to catalyze it. There are many ways of doing this: by demonstrating the joy of discovery, by showing the nature and limitations of theories and concepts, and by reinforcing the participatory nature of learning.

Targeting structure

Let me suggest some aspects of structure and process that may facilitate the above changes, listed in no particular order of importance.

1. The number of students in a class.
2. The architecture of the classroom; design of furniture, where used.
3. Availability of learning material that does not force lecturing from the blackboard.
4. Focus in the curriculum on exploration and understanding, thinking and problem solving skills.
5. Better assessment techniques, reduced reliance on rote, and better examination design.
6. Delegation of authority to teachers and teacher groups in schools.
7. Schools with limited or no hierarchical organization.
8. Higher degree of parental involvement in the school and its running.

I can almost hear readers muttering 'impractical' under their breath. Hold on. While a wholesale instantaneous transformation of schools in all these dimensions may indeed be unrealistic, there is nothing to prevent individuals and groups from exploring specific items mentioned, in ways appropriate to their context.

I would like to continue this exploration by discussing one of the above aspects in some detail—the notion of hierarchy. I will then go on to present some of the challenges and difficulties that a group may encounter in its attempts to modify this dimension.

Hierarchy in schools

Hierarchy is a central feature of Indian society. We are steeped in our belief in status and power derived from our positions in all kinds of hierarchies. Is it realistic to expect a rapid change in attitudes that have been built up over millennia?

I will restrict this discussion to the possibility of non-hierarchical functioning of teacher communities. I propose that altering the power relationships in the teacher hierarchy is a prerequisite to changing classroom dynamic. This process need not be 'revolutionary'. Schools could explore the idea by creating small teacher groups with specific mandates. You could have a group of teachers of the primary section who are entrusted with decision making in all important areas connected with their section. These decisions could range from issues of the school's calendar, assessment of students, communication with parents and sharing of responsibilities. It is important to begin without imposing leaders and 'seniors' on the group.

Will this replace the dictatorship of the individual with a 'dictatorship of the committee'? Not necessarily. In the beginning there might be much confusion. The members of the group would pass through a longish period, developing norms of engagement and decision making. In fact a long period of learning ensues. School authorities will have to support the group through such a process. It is important that these groups are not short lived committees. There might be a tendency for informal leadership to emerge in such a group. There is an entrenched view that some people have a quality of leadership that sets them apart from others and that qualifies them for authority. If such leadership stifles free expression and dialogue in the group, individuals have to learn to assert autonomy. Initiative is valuable; however when it becomes 'leadership', old patterns of power can reassert themselves.

What are the likely problems? Curiously enough, in traditional structures hierarchy masks many patterns of temperament and emotion that a more flexible structure may reveal. For example, there may be high levels of anxiety related to decision-making and thwarted self-interest, inability to sustain open-ended conversations, and inability to brook challenges to one's authority. The importance of these patterns should not be ignored. It is in the discussions in such settings that teachers can explore alternative ways of relating to each other and the art of creative cooperation. I have no doubt that such a learning will, at least in some measure, transfer to the classroom.

The idea of dialogue

Dialogue is a process that might be of crucial support in the transition from a rigid hierarchy to a flexible and consensual form of working. The term dialogue is being used to describe a process of caring engagement and exchange between individuals who, while related for a common purpose, are interested in giving free rein to their ideas and creativity and in listening to each other critically. I believe that groups can gain immensely from such a process.

For close to two decades, I have been associated with Centre For Learning, a small school outside Bangalore. We claim

that it is a teacher-run school. This is meant in the sense that there is no explicit structure of authority in the teacher group and decision-making on all important matters is a group effort. Formal positions have been eliminated. Roles, where ascribed, can be temporary or shared and exchanged over time. Most decisions are taken in the weekly meeting of teachers, normally held on a Friday. The meetings are not presided over by any individual; certain discussions may be moderated by persons who merely facilitate orderly discussion, particularly when the issue at hand evokes great interest and participation.

Dealing with discord

Any group committed to working together has to, sooner or later, confront the challenge of conflict. I would like to distinguish (albeit temporarily, as one usually follows the other) between a discord of ideas and a discord of emotions. Usually groups are better at 'sorting out' conflicting ideas (however noisily!) but are very poor at acknowledging and responding to emotional turmoil. Often, when deeply held ideas are challenged, a highly charged and discordant emotional climate may result. A failure to resolve discord may result in terminal conflict.

Extreme situations apart, groups can use the idea of dialogue to respond to conflict. A willingness to listen to each other carefully and a feeling of 'impersonal fellowship' are qualities that contribute greatly to healthy dialogue and to resolution of discord. Most 'problems' have multiple solutions. Conflict is often the result of emotional identification with particular persons or beliefs. A prior awareness of this may not necessarily avert conflict but might provide a perspective to the group to navigate through a difficult situation.

A creative group needs creative individuals. In a society where teaching is almost a second-rate profession, what are the chances of a radically new outlook taking roots? All that I have suggested in this article rests on the assumption that teachers are interested enough in their vocation to invest a large part of their life-energies in a 'dangerous' exploration of this kind. Can our teachers be educated into participating in all the ways described above?

On Being an Effective Teacher

R Venkatesh

We have all had some great teachers. Or at least, if we have not been fortunate enough, we have heard of great teachers. Let me substitute the word 'great' with 'effective'. What makes these teachers effective? Is this something that others can learn? Can other teachers who are either less or not as effective gain some of the expertise that the effective teachers seem to possess?

It might be a good idea to start with our understanding of the word, 'effective'. I think that the simplest definition is that an effective teacher is one who inspires her students to learn. Or, even more simply, an effective teacher is one who is successful in making students learn. It is possible that there are other definitions, but for the present let me accept these two.

What are the requirements for being an effective teacher? I thought I would take up a few characteristics that I consider important. While these are by no means exhaustive, I think they are more than enough to start our quest.

Subject competence

At the school level, especially at that of the junior school, subject competence may be something that one feels is easy to attain. After all, how much does an eight or ten-year-old need to know? Cannot one just breeze through a class using one's acquired knowledge? This assumption is very far from the truth. Admittedly, most teachers at the junior level have sufficient content knowledge. However, one needs to know the subject so well that one can see how a child understands the subject. If a child comes up with an alternative solution to a situation, the teacher should have sufficient understanding of the subject to see its validity or lack thereof. The teacher should be able to see the chain of thought that led to the student's conclusion. The teacher should be able to give the exact amount of guidance required to enable the student to steer himself in the right direction. If the teacher's competence is limited to offering a packaged solution, he is not doing a great service to the child. Students of the middle and high schools are more demanding. Their

increased exposure to the subject and their general awareness make them demand more. They are not very easily satisfied. They may very well discover answers that the teacher himself is not aware of. The teacher should have the grace and humility to acknowledge this.

Organization of material and lesson plans

Very often, a teacher finds that some stray remark takes the class in a direction that the teacher never planned on taking. What is the teacher to do? Should she rein in the enthusiasm and persist in the direction that she wanted to take or should she give a free hand to the students and take the discussion to wherever they want to take it. A well-organized teacher will be able to come up with a third alternative; take the discussion in the direction it is going but alongside the material that she had planned for the day. This is where a teacher's organization of material and lesson plans comes handy. If every class has been following a set plan (with many unexpected diversions) the students would be able to see the broad picture and notice the continuity. They will try and make a connection to their earlier discussions. Thus, it is very important for a teacher to have his material well organized and have a clear lesson plan. The material should not be of a single variety. Handouts, quizzes, tests, worksheets and other support material make it more interesting for a student. Further, as different students have different approaches to learning, the teacher can respond to each one by providing a variety of material.

Communication skills

The importance of communication skills can never be over-emphasized. Effective communication really means how well one can get one's message across to the listener. If a teacher is dealing with younger children, the difficulty of getting through is even greater. A sound understanding of the subject alone will not do the job; what matters is how well the teacher is able to present it. Does the teacher's presentation allow for different levels of understanding of the student audience? Does the teacher use various types of communication devices to get across?

Non-verbal communication, written communication, gestures and body language—all go into making the subject understandable. The teacher's confidence level can make a big difference to the child's understanding. Does the teacher bring in an atmosphere where learning seems fun? Or does the teacher seem pedantic? Even if the subject is perceived as a 'dull' one, it is up to the teacher to use all his communication skills to get across to the student. This is especially true at the school level. Too much of lecturing is one sure way of killing the interest of most students. It is important to involve them in writing, problem solving, discussions and decision making. It is not really necessary to have

an excellent command of the English language (in an English medium school) or impeccable pronunciation in order to have great communication skills. While this may help to a large extent it is the teacher's passion that really matters.

Classroom management

However small a classroom may be, its management is one of the key challenges faced by a teacher. The larger the class, the more difficult it is to manage the classroom. Classroom management does not mean the physical appearance alone. Getting the classroom to look attractive by using appropriate colours and displays certainly contributes to the atmosphere. However, the issue that I am addressing here is the fine balance that has to be struck in managing the dynamics of the classroom. Every group of students has a range of abilities. At what level does one pitch one's lessons? At the level of students who grasp things quickly and are academically gifted or at the level of those at the other end of the spectrum? Most teachers find a via-media by telling themselves that they try and pitch the level somewhere in the middle. This is a grave mistake. What this does is lose the entire class! It is still too easy for the gifted students and still too high for the weaker students. An effective teacher is one who can address each child's need without any generalization. Many effective teachers are able to retain the attention of the entire class by pitching the material at multiple levels, drawing examples and analogies from a variety of fields. They also have a knack of engaging every student by encouraging the student to bring out the connection she sees from her experience. Such teachers also invariably provide multi-grade tests (often taking care to prepare three or four varieties of test papers) to challenge every student in some way.

A second aspect of classroom management that we need to look at and one that most new teachers face is the potential disorderliness and noise level. The effective teacher establishes the class rules very clearly and firmly. Often, she explains the rationale behind the rules to the students; sometimes even encourages a discussion on the same and invites the student to participate in creating a sense of order. It is very important for a teacher to realize that being young as they are, students do have a tendency to seek some form of excitement and would like to take it easy if the teacher permits it. However, the same students will usually be willing to work if it is made clear, firmly, that the classroom is to be used productively. This firmness coupled with the other facets that make an effective teacher will ensure that the teacher earns the respect of the students.

Passion for teaching

There is an old saying that those who can't, teach. This seems to indicate that those of us in the teaching profession are here solely because we couldn't be

elsewhere. In the case of an effective teacher this is far from the truth. An effective teacher has to be passionate about teaching, about being with young and agile minds—curious minds that are often like sponges that absorb and demand more. The teacher's passion for the subject or the students or both has to come through clearly. The teacher is the motivator in the learning process and where the students are already motivated, he is the facilitator. Effective teachers avoid falling into the trap of basing their responses on the response of the students. They are able to maintain their passion even if they seem to be up against a blank wall. They are confident that their passion will eventually kindle the enthusiasm of the students and it will soon turn into a raging fire of curiosity. It is easy to teach a class of enthusiastic and motivated students. It is very difficult to teach a class of uninterested students who are not academically inclined. The real challenge for an effective teacher is the third case; bright students who are not interested in school work. An effective teacher does not care about the composition of the class. He rises to the challenge each time and is able to kindle interest in his students and raise their levels close to their highest potential.

Empathy, patience and being impartial

The 'human' side of the teacher is dominant in the last four characteristics of an effective teacher. Slow learners, the gifted, and not so gifted students all need to be dealt with empathy and patience. Sometimes it becomes very difficult to manage a class that is being slowed down by one or more students or distracted by some who have moved quickly. The effective teacher needs to understand (and it is not an easy task at all) the minds of every one of his students. Nearly everyone has come across teachers who seem to favour some of the students. The usual characteristics that make one a teacher's pet are academic excellence, behavioral excellence, being good looking and being associated with power or money. The other students in the class can see through this very easily while the teacher may be genuinely ignorant of his favoritism. The effective teacher never favours one over the other. She deals with each student as an individual who is nevertheless subject to common rules. She genuinely treats every one as an equal. In fact, every student in the class is the teacher's favourite. Every student is made to feel that the teacher is approachable at any time and that the student will receive the same attention as anybody else in the class.

Being non-judgemental

We as human beings are very judgemental. We are constantly judging others and comparing and contrasting and checking out actions and words against what we know of human behaviour. We find it very difficult to be non-judgemental. Most effective people have the ability to look at events and not at personalities. They avoid judging a person and focus entirely on the action. Students are mortally scared of being

judged. Their whole academic life seems to be aimed at pleasing someone or the other. They are constantly looking for the approval of their parents, their teachers and, very often, their peers. It comes as a fresh surprise to them when the teacher does not judge them. The effective teacher believes that her role is only to enthuse the student to learn, to be curious and to try his best. The effective teacher understands very clearly that a student who seems to have difficulties at school at the present time need not have them in future. Thus, an effective teacher does not judge the student but responds to his present performance. She knows that all students do not learn at the same pace or in the same way and hence does not consider a student's inability to learn something now as an indication of failure.

Being accountable

I would like to end this article on effective teachers by looking at the important factor of accountability. While every profession demands accountability, I believe that from some kinds of professions like the medical , law enforcement and teaching we need to demand an even higher level of accountability. An effective teacher needs to take responsibility for the learning process. He has to be there for the student whenever possible. The effective teacher puts the student's interest above his own. Sometimes a teacher gets bored teaching the same subject and although she is very good at it, she wants to develop her other interests and wants to try something else. It is certainly fair for teachers to develop themselves but not at the expense of the students. If an effective teacher has a skill that will benefit the students, she does not hesitate to share this with them. Like doctors and judges and statesmen, teachers too need to place the interests of their students above their own. An effective teacher is one who makes the interests of his students his personal interest.

Music in the Classroom

Ruth Chandy

Some years ago, I attended a workshop conducted in Bangalore by teachers from the Royal College of Music, Stockholm. One memorable session was on teaching percussion to a fairly large group of students. A teacher sat in a corner of the room, beating out a rhythm on a small drum. As the students trickled into the class, they were free to pick up whatever instruments were available, or to sit where they chose and join in the rhythm by clapping or tapping—no coercion, no instruction—the beat was there and each student took his or her own time to settle in to it.

One of the biggest challenges for a novice teacher is the difficulty of establishing order in the classroom. It is fairly common to see teachers struggling with a class of disorderly children, trying in vain to establish a modicum of silence so that the lesson can begin. Giving instructions seems to be a test of who can shout the loudest. The Swedish teacher preferred to let his instrument do the talking for him. And the students listened.

Often in a music class, students are asked to stop reading the notes they are playing, and instead walk to the beat, and only when they have got it into their system, do they actually translate it into a tune on their instruments. Tuning into rhythm is an extremely effective means of establishing a link between the movement of the mind and what students can feel at a deep level in their bodies. While teachers of music have actively worked towards establishing this connection between body and mind, most classroom situations at best pay lip service to this connection.

As a teacher of Literature, I clearly remember having an undergraduate class of over a hundred students who had the daunting task of extracting meaning from some lines of Chaucer's Canterbury Tales. How was one to quell

the near panic of first-time literature students who were suddenly looking at a language which had very little connection with what they knew of as English? It seemed pointless to tell them that Chaucer was writing in the language of everyday people! The best bet seemed to be to shut the books and get the students to tap out the rhythm of the lines with their pencils. As I read the lines out loud, the comfortable jog trot of the iambic pentameter, and the tapping of a hundred pencils, took on the rhythm of the horses on the way to Canterbury, with the pilgrims inside the coach regaling each other with their stories. Rhythm created a democratic space for all of us to drop our fears of the text, and participate in the form of the poem, the skeleton, as it were, which could take on flesh and blood, once the students were comfortable.

Of course fear of the text is not the only dynamic which operates in a classroom situation. Interpersonal conflicts are the stuff of which student worlds are made!

I clearly remember one classroom in 2006. It was rife with all the tensions and inter-group warfare that assume epic proportions in a teenager's world. My task was to teach them T. S. Eliot's *Journey of the Magi*. It was rather close to Christmas, and with a couple of guitars and an available keyboard, the class divided itself into instrumentalists and singers, and three adventurous souls took on the characters of the Magi. Before long the rest of the school was being regaled with a spirited rendition of 'We Three Kings of Orient are…' The class bonded and the mood was set for the greater complexities of Eliot's poem. And yet, at the level of the senses, and simple surface meanings, the poem was more than half done. After class was over, one of the students who had played the guitar commented on the aptness of using the minor key for the carol. The sadness of the Magi's recollections of an epiphanic moment, which also held an awareness of alienation and death to come, was perfectly in tune with the carol's modulation between major and minor chords—the plaintive minor predominating.

Quite apart from the sheer entertainment value of these excursions into a different art form, music offers much greater possibilities of allowing the students to connect emotionally with the text. I am reminded of a line from an essay by E M Forster: 'Music lies deep beneath the arts…and makes minor artists of us all.' Perhaps it is only when we can put young people in touch with what is very deep in themselves, that we can get them to experience at first hand, the world of a creative artist.

Another aspect that keeps coming up in the classroom is the skill of memorization. Many of my students struggle with having to remember lines from a poem or a play, to be able to quote them in an exam. Thinking about this takes me back in time to my schooldays in Delhi, when Russian was being offered as a third language, in the heyday of Indo-USSR friendship. We started the course with a very traditional teacher who threw terrifying rules of grammar at us. To this day I'm blessed if I can remember the rules for those conjugations. At most I can make it to, 'Ya znayu, thi znaesh, on/ona znayeth' (I know, you know, he/she knows). But the next teacher we had was every child's dream come true. Little more than a schoolgirl herself, she charmed her way into our hearts with her spirited dances (of course, all the boys joined in) and she insisted that we all dance to the songs she taught us. Thirty years later my sister and I found ourselves singing those songs as we cut vegetables in her kitchen. Not a word had been lost.

Still further back is an incident that took place in a Sunday School classroom. I couldn't have been more than ten or eleven at the time. Our teacher was ill, and a stranger walked into our class. She was obviously horrified at the spectacle we presented. Shoes kicked off, hair ribbons trailing in the melee of a vigorous game of 'seven tiles'—all pretences of Sunday attire and piety had been abandoned. Mrs. M decided to quiz us on the extent of our Bible knowledge, and asked us if even one of us knew the Nicene Creed. All of us stared back at her in blank mystification. When our regular teacher came back the following week, all of us gheraoed her for clarifications. 'What did that strange lady want from us?' 'Oh, you mean she wanted to hear the I Believe? Why didn't she say so?' The raggle-taggle group was word perfect on the Nicene Creed. All she had to do was to ask us to sing the words!

Establishing quietness as a readiness for learning, dealing with student fears, adding atmosphere to the text, facilitating memory—all these are worthy classroom ambitions. And doubtless there are many strategies which experienced teachers use to enhance learning. What is it that makes the use of music so important to me? Why do I use it at every opportunity I get? I'm no concert performer. The training I've had has at best been sporadic, and much of my excursions into music have been the moving around of a creature 'in worlds not realized'. And yet I find that there is something very deep in me which responds to something that music represents. Perhaps I would do

well to use the words of the Israeli conductor Daniel Barenboim to sum up my thoughts at this point.

> *If we are to understand the phenomena of nature, or the qualities of human beings, or the relationship to a God or to some different spiritual experience, we can learn much through music. Music is so very important and interesting to me because it is at the same time everything and nothing. If you wish to learn to live in a democratic society, then you would do well to play in an orchestra. For when you do so, you know when to lead and when to follow.You leave space for others and at the same time you have no inhibitions about claiming a space for yourself.*

In the last twenty years of my life as a teacher, I have found myself in varied relationships with students who, like me, are groping for meaning, grasping at beauty in art, literature, music; trying to make sense of the world, and to hold their own end up. And these relationships are, by their very nature, dynamic. I lead…they follow…they lead…I follow…sometimes we walk together, at other times alone.

Seeking out a New Role for Dance

Shabari Rao

Most often when I lead a dance class for the first time, the response I get from the boys is, 'Yuuuuukkkkk dance! It's for girls!'; and from the girls it is, 'But when are we going to dance?' By the end of the session all the children would have engaged with ideas, and used their bodies to express these in space. This style of dance may not fit the traditional expectations of what a dance class should be like. It is in fact a very new approach, which for lack of a more imaginative name I call, 'Creative Dance'.

Currently, and traditionally, dance in schools is strongly rooted in a particular form. The form could vary from folk to classical, martial to Bollywood! In such a scenario, the teacher is trained in a particular dance form and comes to the class to pass on that training to the students. The value of this is undoubted because here the students learn the details of a formal language, concentrating on the specifics of the shapes and patterns of that language. Usually, in such a class the teacher would stand in front of rows of students and demonstrate the steps, requiring the students to learn by copying. At its worst, this method can appear very rigid, with the teacher unwilling to question the way he/she was taught—and the way he/she is passing on that learning.

A further pressure on such a method of dance classes is the performance aspect. Since the students have learnt a sequence in a particular form, the emphasis is on the accuracy of execution. The most 'talented' child (usually a girl!) will stand in the front and the rest follow as best as they can. When the main aim of a dance class and the teacher is to get the students ready for a show there is very little time for questions or change. The focus becomes the detail and the ability to execute the steps as precisely as possible. While this method suits some, it can take away the interest of the majority of the

class. In my opinion this kind of form-based dance training works best when the student is there by choice and is interested in the particular form.

If we were to look at creative dance as a 'tool' rather than a form, there is much more scope to engaging everyone in the class in a meaningful way. By 'tool' I mean that the body is looked at as a medium of expression, thus allowing children of differing physical and technical ability the chance to explore things somatically. Here the creativity and expression of the child is the focus. Individual quirks and choices have as much validity as group decisions. For example, if you ask the children to each come up with a sequence that includes a turn, a jump and a floor movement, what each child chooses to do will be unique. You might then ask the children to find partners and teach each other their sequences thus encouraging sharing and stepping out of comfort zones.

Also central to creative dance is a sense of play. There is no one way to do something and each variation is valuable. Children are encouraged to explore different ways of solving a creative task and to then refine their solutions. Since we are not using a predefined dance vocabulary the potential of the body is limited only by what is physically possible!

So one might ask what the role of the teacher is in such a dance class. For example, would the teacher teach any set material? What would be the place of set material in this context? I believe that taught dance movements and sequences have an important role in a creative dance class. These serve two purposes. Firstly, when children are faced with something unfamiliar they are often unsure of what is expected. Teaching them some movements and illustrating in movement what you are saying is helpful. If you ask the class to make 'a very big, strong movement' and demonstrate an example as you speak, the class will copy you the first couple of times and then begin to explore their own movements.

Secondly, the dance teacher can use set material to push the limits of what children see as dance, and of what they think they can do. There is an undoubted pleasure in mastering something challenging. However, the focus on the technique and accuracy of the steps is gentle. Here a taught sequence can later be reworked individually into original sequences. For example, you might teach a phrase of four counts and ask the students to make up another four counts themselves. In such a context the taught phrase provides some of

the building blocks that a child can use. In a typical creative dance class there would be a balance of taught material and creative tasks. This allows for both the discipline of learning together and individual creative expression.

A creative dance class requires a lot of planning. Since the teacher is not coming to the class to pass on what he has been taught, he needs to think through his ideas, how he will articulate them to the students and what he would like them to get out of the class. Ideally a whole term's worth of work is roughly planned at the start of the term and each weekly plan is filled out with details as the term unfolds. The two questions I usually start with are: 'What do I want the children to explore?' and, 'How can I devise a physical task that enables them to explore this?' This is probably how a teacher would approach the teaching of any subject in a creative way; that is, looking at the content and the form or methodology. The only difference is that the games, exercise and tasks are set within a movement context. Thus a creative dance teacher could be previously trained in any dance form (or even, perhaps, have no formal dance training) but would need to be willing to experiment and explore the possibilities of using movement differently.

Since one of the most fundamental properties of dance is that it is metaphoric, I believe any subject matter can be explored through this medium in a safe and educative way. One can start with an idea or theme and look at it in a non-literal manner, abstracting the essence into images and then manipulating them. For example, one of the classes that I currently teach wanted to explore 'War' as their theme for the term. We have been looking at body shapes that are powerful and powerless, moving together as if we are a single body; exploring movement without using one body part such as the legs and other similar ideas. These ideas use images of war without making it a literal depiction of 'I'll shoot you and you shoot me'. Similarly any theme, and I really do mean any theme, however abstract or real can be investigated through dance and movement.

When you consider dance in this way the potential for linking it with other areas of the curriculum are immense. No longer does the poor dance class sit outside the overall educational experience of the child, but rather it forms an integral part of it. In today's classrooms where the 'project' method of teaching is widely used, creative dance can play an important role. The social sciences, language, science or mathematics can all be drawn upon in a

creative dance class. This allows us to go beyond the details of the things we learn and explore their essence. It is the dual nature of dance—the metaphoric and the artistic—which encourages a different understanding.

The Philosophical Underpinnings of Holistic Education

Kalpana Venugopal

Holistic education is a philosophy of education based on the premise that each person finds identity, meaning, and purpose in life through connections to the community, to the natural world, and to spiritual values such as compassion and peace (Miller, R. 1997).

It is based on the philosophy of 'holism'. It involves the integration of multiple layers of meaning and experience through direct engagement with the environment. Holistic education is more concerned with drawing forth the latent capacities and sensitivities of the soul than with stuffing passive young minds with predigested information. It is an education that prepares young people to live purposefully, creatively, and morally in a complex world.

To understand the meaning of holistic education, we need to recognize two principles. Firstly, an education that connects the person to the world must start with the person—not some abstract image of the human being, but with the unique, living, breathing boy or girl, young man or woman (or mature person, for that matter) who is in the teacher's presence. Each person is a dynamic constellation of experiences, feelings, ideas, dreams, fears, and hopes. Secondly, we must respond to the learner with an open, inquisitive mind and a sensitive understanding of the

world he or she is growing into (Miller, R. 2000a).

Some advocates of holistic education claim that views central to it are not new but are, in fact, timeless and found in the sense of wholeness in humanity's religious impetus and inspiration from great philosophers, both eastern and western. In fact, the principles and practices of holistic education are already used by a number of institutions that are dissatisfied with traditional education, but they may be unaware of any critical theory about holistic education.

A holistic education is usually characterized by several core qualities.

- There is concern for the interior life, for the feelings, aspirations, ideas and questions that each student brings to the learning process. Education is no longer viewed as the transmission of information; instead it is a journey inward as well as outward into the world.
- Holistic education expresses an ecological consciousness; it recognizes that everything in the world exists in context. This involves a deep respect for the integrity of the biosphere, if not a sense of reverence for nature.
- It is a worldview that embraces diversity, both natural and cultural. It shuns ideology, categorization, and fixed answers, and instead appreciates the flowing interrelatedness of all life.
- It is an education that recognizes the innate potential of every student for intelligent and creative thinking. It is child-honouring education, because it respects the creative impulses at work within the unfolding child as much as, if not more than, the cultural imperatives that conventional schooling seeks to overlay onto the growing personality.

Thus, holistic education is essentially a democratic education, concerned with both individual freedom and social responsibility. It is education for a culture of peace, for sustainability and ecological literacy, and for the development of humanity's inherent morality and spirituality.

Premise and purpose of holistic education

The basic premise of holistic education is the belief that our lives have a meaning and purpose greater than the mechanistic laws described by science, and greater than the 'consensus consciousness' of any one culture. This transcendent purpose is a creative, self-guiding energy, which we ought not to attempt to suppress. To enable transcendence of society's prejudices, ideologies, and violence—to educate for peace—we need to reclaim

the true meaning of 'education' from the soul-numbing system of schooling within which the modern world has imprisoned its children. We read the words of Krishnamurti who writes: *If the unity of life and the oneness of its purpose could be clearly taught to the young in schools, how much brighter would be our hopes for the future!* (Krishnamurti, J. 1974).

The purpose of holistic education is to prepare students to meet the challenges of living as well as academics. It aims to call forth from young people an intrinsic reverence for life and a passionate love of learning. This is done, not through an academic 'curriculum' that condenses the world into instructional packages, but through direct engagement with the environment. Holistic education does not simply instruct young people about what is true and what is false, but enables the learner to inquire: what does this mean? How is this experience, or this fact, or this advertising message related to other things I know? If I act on my understanding, how will that affect other people, or the habitat of other living beings? This encourages young people to care about the world they live in. Other people matter, the natural world matters. Cultural heritage, social responsibility, and ethics matter.

Holistic education hence aims to call forth from people an intrinsic reverence for life and a passionate love of learning. To educate young people means helping them bring forth their creativity, their compassion, their curiosity, their moral and aesthetic sensitivity, their critical intellectual skills, their ability to participate in a robust democracy—in a word, their wholeness.

Teaching with a holistic curriculum

Curriculum emerges from the interactions between teacher, student, and world. This idea—emergent curriculum—is one of the revolutionary concepts to come out of the progressive education movement (Miller, R. 2000b). Children need to develop academic capacities, as these are required to make a living in the modern world, but much more is needed. Since holistic education seeks to educate the whole person, there are other key factors that will be essential to a holistic curriculum. First, children need to learn about themselves. Second, children need to learn about relationships. In learning about their relationships with others, there is a focus on 'social literacy' (learning to see social influence) and 'emotional literacy' (one's own self in relation to others). Third, children need to learn about resilience. This entails overcoming difficulties and facing challenges. Fourth, children need to learn about aesthetics, to see the beauty of what is around them and experience a sense of awe in its presence. It doesn't appear that we will learn such things from learning more Mathematics, Literature, or History.

With this curriculum in mind, how can we go about teaching for holistic learning?

Since 'holism' understands knowledge as something that is constructed within a person's context, meaningfulness is an important factor in the learning process. People learn better when what is being learned is important to them. Therefore, a topic may begin with what students know or understand already, what has meaning to them, rather than what others feel should be meaningful to them.

Meta-learning is another concept that connects to meaningfulness. In coming to understand how they learn, students are expected to self-regulate their own learning. However, they cannot be expected to do this on their own. Students learn to monitor their own learning through interdependence on others inside and outside the classroom. Thus a sense of a learning community is an integral aspect of holistic education. As relationships and learning about relationships are keys to understanding ourselves, so the aspect of community is vital in the learning process.

The holistic educator is seen less as a person of authority who leads and controls and more as a friend, mentor, facilitator, or experienced travelling companion. The teacher's role is an active one involving the preparation of rich, supportive learning environments for effective facilitation of growth through learning. Teacher direction and supervision are required in order to put the dynamics of freedom to proper use.

Conclusion

It is imperative to note that holistic education is not a specifiable model or ideology, but an attitude or orientation of openness to the living presence of our children/students and to the complex and dynamic world around us.

If the goal of holistic education is connection, then we are ultimately dealing with spirituality, and with the unfathomable meaning of the cosmos. We are trying to help our young people find a place deep within themselves that resonates with the mystery of creation. And it is only when we, as educators, look deeply within ourselves and strive to embody wholeness in our own lives that we will inspire our students to do the same. Our lives make up the curriculum. Let us work on ourselves, and our lesson plans will take care of themselves. Holistic education, then, is a pedagogical revolution. It boldly challenges many of the assumptions we hold about teaching and learning, about the school, about the role of the educator, about the need for tight management and standards. Holistic education seeks to liberate students from the authoritarian system of behaviour management that in the modern world we have come to call 'education'. But ultimately holistic education is far more than radical pedagogy. Holistic education opens up crucial dimensions in learning. When learning is seen in a new extended

epistemological framework where science and spirituality are compatible, no longer contradictory, science acquires human sensitivity and consciousness becomes fundamental in the integration of the cosmos.

References

1. Krishnamurti, J. (1974). *Education and the Significance of Life*. Pondicherry, India: All India Press.
2. Miller, R. (1997). *What Are Schools For? Holistic Education in American Culture* (3rd ed.). Brandon, VT: Holistic Education Press.
3. Miller, R. (2000a). *Creating Learning Communities: Models, Resources, and New Ways of Thinking About Teaching and Learning*. Brandon, VT: Holistic Education Press.
4. Miller, R. (2000b). *Making Connections to the World: Some Thoughts on Holistic Curriculum*. Brandon, VT: Holistic Education Press.

The School of Life

Stephen Smith

Prefatory Note

Since the publication in July 2006 of the Journal of Krishnamurti Schools 'dedicated to the teacher', there has been an increasing, if varied, response to the necessary task of educating the educator. Whether in the form of study groups for teachers (Valley School, Bangalore), the Teachers' Academy at the Oak Grove School, California, or the ongoing series of workshops and seminars for teachers in non-Krishnamurti schools sponsored by Krishnamurti Foundation India, the focus and the flame are being maintained. Serious and important as these initiatives are, there is still, at the time of writing, no full-time residential course for teachers, including particularly prospective new teachers. We must cut our coat according to our cloth.

With this in mind, I went to Brockwood Park School between mid-April and mid-June, to work specifically with the mature students. These are young people in their twenties—most of them have university degrees—and, aside from their daily work in the community, eight of them professed an interest in meeting with me around the topic of education. Our six-week Intensive began on May 1, 2008. It focused initially on study and dialogue using topics to be found in the Teacher Education Manual, a compilation of extracts from Krishnamurti's teachings on educational topics such as conditioning, the place of knowledge and the art of attention. For the present writer, such topics are so basic that they must serve as a launching pad for any exploration worth the name. The students responded well, but it became obvious after some time that a more active form of engagement was required. Bearing in mind the three-point objective of these schools, that they ought to, in the words of Krishnamurti:

- cultivate a global outlook
- develop care and concern for mankind and the environment
- bring about the religious mind,

it was decided to focus on the last of these, considering—by a generous estimate—that the first two had been, to some extent, addressed.

Certain key features of the religious life—standing alone, awakening intelligence, living an integrated life and such like—were presented as central to the endeavour, but there were no material constraints: the students had been gifted a vast sum of money and were free to start the school wherever they chose. From then on, all the choices were theirs. After reviewing their projects (three in all) I drew them together as the text which follows makes apparent. I also made some marginal extrapolations, but nothing that cannot be derived from their work. The title also came from them. It is hoped that, in offering this modest document, there may be some firming up of focus on what was, and remains, the deep purpose of these schools.

The School of Life

Project to Design a School where the Cultivation of the Religious Mind is the top priority

Big picture

- The new human being
- Time and space as organizing principles
- Exploring conditioning through discussion and exercises
- Re-examination of academics on a questioning basis
- Atmosphere of excellence
- The importance of silence
- Leisure being at the heart of the endeavour
- No separation between relationship, work, leisure and life
- Seeing, not thinking, as the defining feature of the religious mind
- Though this cannot be cultivated by a method, it could emerge from right education

Detailed picture

Location: This will be a developing country in Africa or Latin America with a warm climate, to aid in its aim to be low-cost and self-sustaining. The school will be in a beautiful natural setting, thus fulfilling its mission to awaken the senses and develop the feeling for beauty in students. Students may have a role in physically building, as well as creating, the place.

Sustainability: The school will have its own grounds and garden; it will seek to be independent so far as energy is concerned, using solar panels, methane gas, etc.

Management: All will be involved in the decision-making process, though not everybody will take decisions. The socio-political form will be that of a 'consultative non-democracy'. Initially, there will be no rules; on an ongoing basis, however, these may be formulated as need arises.

Cooperation: There will be no psychological division between teachers and students, though functional authority may be required. Students work together to help one another—for instance, the older ones may teach the younger. From its inception, the school will generate the sense of an organic community where the good of each is the good of all.

Standing Alone: Each person, adult or student, will have his or her own dedicated space which, given the climate, may be in- or out-of-doors. It will be there for their use not only as a facility, but mainly to cultivate the importance of being alone and having one's own QuietTime. The intention is also to foster self-reliance, working out problems for oneself, be they mechanical (mending a bicycle) or psychological (reactions and wounds).

Structure: More focused learning will take place in the morning, with activities in the form of projects or 'work parties' in the afternoon. As part of the attempt to re-evaluate what we're doing, the given subject categories, which come from the Greeks, will not necessarily be adopted; instead, there may be an 'observer-is-the-observed' approach, which includes the learner as subject, showing how consciousness itself has developed and how it conditions the human brain.

Subjects: As part of the re-examination of academics on a questioning basis (see Big Picture), subjects, even in the classic mould will undergo constant re-examination. An underlying question might be: 'What is science?' Or 'What is language?' In order to break down these classic subject categories, a move towards contextual learning will be encouraged, e.g. Literature in the context of its time, with its socio-political-cultural movements. Students should be helped to see themselves in History, and History as the story of mankind, i.e. themselves. This requires some transhistorical thinking.

Examinations: Observing the anxiety and competitiveness, which seem endemic to the examination process, the attempt will be made to find other ways and means of allowing students to enter higher education.

Inquiry: The universal and the particular, the personal and the impersonal, will not be seen as being in opposition to one another. There may, hence, be an investigation of fear in general—say, through dialogue—as well as an exploration of the individual's fears.

Break-up of Age Groups: The school (Gk. *schole* = leisure) is a place for young people of all ages. The following age settings are envisaged, with vertical groupings in the first two sets:

7-10 years: The emphasis will be on learning through the physical: building, hands-on activities, playing. Intellectual development will not be forced.

11-14 years: Exploration of the physical world will continue, with the beginning of reflection and conceptualization. Here, there may be projects on themes such as water, air, combustion, etc., with physical activities such as digging, planting, sowing, reaping, and the reading of poetry and listening to music around these themes.

14-18 years: We will begin to explore in a more consistent way the more obvious areas of conditioning, distinguishing reactions from accurate responses.

Quiet Time: The day will begin with wholesome, meditative exercises, e.g., yoga, tai-chi, chi-gong (roughly half an hour) and move seamlessly into a silent Morning Meeting.

The Religious Mind: This establishes, and is the outcome of, harmony between nature, people, things and ideas. It requires energy, interest and commitment; and works through the process of not knowing. This will at all times be central to the endeavour.

Scribbles on a Blackboard
Travels to a Turkish Mathematics Village

Ashna Sen

An e-mail query in support of a Turkish Mathematics Village more than a year ago lead to a most illuminating, intellectually broadening and exciting experience at the annual Turkish Mathematics Summer School in the idyllic and sleepy but enchanting village of Sirince. A friend had shown me a news story about the world's first 'Mathematics village' on the verge of being 'shut-down' because of unnecessary bureaucratic hassles. Left with an un-translated foolscap Turkish news article about what seemed to be an unprecedented experiment—the opening of an Ionian style village, purely for the sake and study of Mathematics—my curiosity was whetted. I wrote a brief note to Ali Nesin, Chairman of the Mathematics Department at Istanbul Bilgi University and the man responsible for this undertaking. Instead of just a 'thank-you for-your-support' response I received a long e-mail description of the place and an invitation to be one of the volunteer instructors for an undergraduate level course. Soon after, I received a timetable of classes with my name inscribed for the allotted time. I was scheduled to teach Classical Mechanics while representing Brockwood Park School at Nesin Matematik Koyu.

Thus began my summer rendezvous in the Aegean village of Sirince, a place of ethereal rustic beauty with its stone houses, olive orchards, vineyards and winding dust-roads. As I entered the Mathematics village, a short distance from the main village-centre of Sirince, built on fields belonging to the Nesin Foundation, I was transported to the era of Pythagoras even in the style of the dwellings and classrooms. Incidentally, Pythagoras who hailed from Samos, an island not far from my host village, had many followers devoted solely to the magic of numbers and the study of Mathematics. The Mathematics village was newly built, but in the manner of the ancients, with stone-walled houses,

supported by wooden beams and caked with mud. Students in the previous years had helped in its construction and it included accommodation for the 60 odd students who assemble for part of the summer every year. Alongside the living quarters were found two separate hammams with blue domes that provided afternoon respite during the scorching summer months. The motivation for spending time here is not the acquisition of a degree, or any certificate or accolade, nor a diploma or qualification. It is purely for the love of the subject, a motiveless quest for excellence and deep inquiry.

Many of the students lived in dormitory style accommodation while some with a more hardy bent of mind pitched tents in the blistering summer heat. Classes began at 7:30 a.m. and carried on until noon, and recommenced at 4 p.m. to continue for four additional hours. Not every student attended every class or course offered; they were chosen according to individual levels and areas of interest. Most of the lectures were conducted by practising mathematicians, although some advanced students also delivered lectures or seminars on selected topics. In the evenings the students studied by themselves or in groups, seeking advice on difficult or unsolvable problems, consulting with one another, enjoying each others' company until the wee hours. I was lucky to join in on the regular evening musical soirees, where the lilting voices of some of my students, singing folk songs on their balamas, a traditional lute-like instrument, filled the air, creating an atmosphere of magical intensity.

Even the classical architecture of the village seemed to inspire mathematical contemplation. Trees grew from the floors of the classrooms, soaring through the thatched roofs. I taught in an Ionian style outdoor theatre with seats of local stone draped with Turkish kilims while cloth pennants fluttered in the breeze overhead. The whole village was laid out in a way that encouraged constant movement; there were no dead-ends. Rather, each area of the village flowed into the next in a most ingenious way, like a scientist's mind sailing through the sea of mathematical forms and relations. There was no final harbour except truth itself.

Though my husband, who accompanied me on this trip, did not have an official teaching post, he easily weaved his way into the spirit of the village. Impromptu philosophical conversations with several of the professors gradually evolved into more in-depth conversations about the history and development of Mathematics from the philosopher's point

of view. This caused enough excitement in the village and he was invited to teach a course on the Philosophy of Mathematics the following year. He also got on very well with the students, volunteering to teach them English during the mid-day siesta hours and early morning Hatha Yoga on a nearby mountain top at dawn.

This easy spirit of adaptation was one of the main qualities that made the Mathematics village such a wonderful place. The village somehow seemed to bring out the best qualities in everyone: selflessness, care, vigour, a ceaseless spirit of learning and deep curiosity. It made me wonder how all these qualities were achieved without the conscious striving for them that I often encounter in most institutions. The village was a community in the truest sense, a place where all ages were welcome, from families and older relatives to the youngest infant. They added to the tapestry of the place, residing for some weeks or months as accompanying guests. The cook, a cheerful lady (who was reported to be an erstwhile bus driver) , charmed us every day with her culinary wizardry. She even started cooking primarily vegetarian dishes as a gesture of hospitality towards the new guests. The students helped in the kitchen and participated in the daily chores, through a rota system that inter alia involved wiping tables, upkeep of the dining facilities, dish washing and peeling vegetables. Much to my surprise, they fully immersed themselves in the general care of the place, including in tending the small vegetable garden with enthusiasm and gusto.

My general teaching philosophy and outlook is that the teacher is also a student. I often learn about effective teaching and learning through my students, who offer me suggestions and tips on how to progress with my lectures (through their questioning and alternate approaches to problems that I myself may have overlooked). My goal as a teacher of Mathematics has always been to express in the simplest terms ideas or concepts that otherwise seem cloaked in difficulty. Thus the art of teaching a notoriously difficult subject like Mathematics, particularly in its more advanced forms, involves a delving together to uncover the symmetries and underlying principles of the subject. Thus, together with the students, we discovered how Newtonian Mathematical Physics, which I introduce at the beginning of my lectures, gives rise to a more powerful approach introduced by Lagrange, Hamilton and Jacobi, mathematicians who paved the way for the beginnings of Quantum Mechanics as well as a more complete understanding of the laws of Physics

and the nature of Matter and Energy. The lectures, mainly conducted on a blackboard, using chalk and duster, lasted for about two hours including the question and answer sessions and systematically traversed the journey from Newton's Laws to the beginnings of Quantum Mechanics. Ultimately, we discovered with the help of some of my colleagues, that 'symplectic geometry' creates a bridge between classical Mechanics and Quantum Theory.

Another fortunate encounter during my stay at Nesin Matematik Koyu was with Alexander Borovik, a professor of Mathematics I had first met during my doctoral studies at the University of Manchester. He pointed out that hidden structures and concepts of Elementary Mathematics which frequently remain unnoticed, nevertheless significantly influence students' perception of Mathematics. As an outcome of our breakfast conversations, he sent me a chapter of his new book, *Shadows of the Truth: Metamathematics of Elementary Mathematics*, for my feedback and suggestions. While presenting the theme of his book, Professor Borovik extensively analyses real life experiences and episodes relating to the mathematical encounters children have when they are first introduced to the subject. In studying the formation of mathematical concepts in a child, he gains insight into the interplay of mathematical structures within Mathematics itself. He suggests that a philosophically inclined reader would notice a parallel with Plato's Allegory of the Cave. The children in his book see shadows of the Truth and sometimes find themselves in a psychological trap because their teachers and other adults around them are blinded both to Truth and to the shadows around it. At the start of his book, Borovik relates an illustrative example from his own childhood that pertains to the difficulties encountered in the very elementary structures of the subject that teachers often gloss over, leaving the hapless student frustrated and bewildered. He was instructed by his elementary school teacher that he had to be careful with 'named' numbers and not to add apples and people. He remembers asking her: why in that case can we divide apples by people?

10 apples: 5 people = 2 apples.

What is more discomforting, when we distribute 10 apples giving 2 apples to a person, we have

10 apples: 2 apples = 5 people.

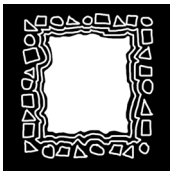
"Where do 'people' on the right-hand side of the equation come from?

Why do 'people' appear and not, say, 'kids'? There were no 'people' on the left-hand side of the operation! How do numbers on the left-hand side know the name of the number on the right-handside?"

In this case the teacher failed to outline the fact that in the first example 'apples' divided by 'people' should give 'apples per people' and in the second case 'apples' is divided by 'apples per people' to give 'people'.

I was fascinated to rediscover the hidden mysteries of Elementary Mathematics, realizing that as a teacher one had to possess substantial insights into the structure of the subject even when teaching the basics. I enthusiastically wrote back to the professor offering a few tips on dimensional analysis and its history and a few other suggestions.

As I reflect on a summer well spent, I realize that the Mathematics village is indeed, in the words of Ali Nesin, a 'beacon of hope'. It not only shines light on a holistic approach to learning Mathematics from the most elementary to the most advanced levels, it also proves that learning and education have no restrictive boundaries. I do hope that a project like the Mathematics village will continue to flourish for years to come, touching the lives of many keen students of the subject and supporters of this enterprise.



Envy and the High Demands of Love

Brian Edwards

Envy is a curious emotion with a long and tragic history in human affairs. At certain times, such as the English Renaissance, it was said to be the worst sin of all, as it disrupted the most natural and healthy form of bond: brotherhood.

There are many ways in which we might show up the nature of envy, so that in becoming clear we can wriggle free from its dark and burning grasp. As this is being written in a Mathematical village in Turkey established by the Nesin Foundation, perhaps we can take an approach that suits the location. Aziz Nesin was a famous comedian and communist leader in 20th Century Turkey. His wit often dissected the hypocrisies of a corrupt and proto-fascist government, and he formed a foundation to take care of street children who were otherwise being abandoned on the streets of Istanbul and Ankara. The Nesin foundation has thus been mostly concerned with creating and administering orphanages. Aziz's son, Ali, became a famous mathematician in his own right, and concerned that the state of higher education in Turkey and around the world was falling totally under the necessities of profit and business, decided to return to first principles. The entire tradition of the Academy goes back of course to the Greeks, and though Plato founded the first Academy, which later evolved into the University, Plato was heavily indebted to the ideas of Pythagoras. In the 6th Century BC, Pythagoras founded a polis mathematikos, a mathematical village, on the isle of Samos just a few miles off the coast of Turkey. The latest enterprise of the Nesin foundation is to found a village in a similar spirit,. In nearby Samos, 2600 years earlier, Pythagoras and his followers had formulated numerous revolutionary mathematical principles, the most famous being the Pythagorean triangle. Much more influentially, through his experiments with a self-constructed monochord, Pythagoras discovered the ratios of the musical octave, the foundation of most music in the world ever since. Could similar rich things be discovered in the Nesin village—a place

devoted to pure research and mathematical contemplation? That remains to be seen.

To return to our discussion of envy, I need to speak a bit more about the Pythagoreans and how they understood the cosmos. To them, the whole of this cosmos was a beautiful harmonious form. We humans, however, were not born with the ability to see the form or hear its harmony; therefore education was central to guiding us to do this. It wasn't enough for Pythagoras to teach in the open spaces of Ionian cities such as Ephesus. He wished to found a city where all things conformed to the most perfect mathematical ratios, and thus reflected the sublime harmony of the cosmos in human dwelling. Thus he founded a Mathematics village at Croton, a place to give birth to a new kind of human life in tune with the inherent universal harmony. These villagers were vegetarians, and by day tilled the earth and built simple dwellings, while nights were spent gazing at the stars, seeking inspiration for mathematical insight. Although Mathematics and Geometry were the main topics of dialogue, Pythagoras coined a term for their whole enterprise; he called it Philosophia. At this time in Greece and Ionia there existed no schools as such; rather, wise men who called themselves sophists taught whoever would pay them in the open spaces of the larger cities. Typically these were the sons of the rich. Pythagoras opposed most of the sophists, for he felt they were just as often as not teaching false doctrines and therefore ruining the minds of the youths. He questioned their claims to wisdom (Sophia), calling them hubristic, for humans were not by nature wise and never could be. Only the gods were truly wise. Humans could imitate this however by *philo Sophia*: they could *love wisdom*. Thus he initiated the tradition of the philosopher, one who remained in a state of permanent yearning for wisdom, of love and adoration for wisdom, but retaining the humility of acknowledging that they did not possess that wisdom themselves.

Plato was greatly indebted to the Pythagoreans, and in particular he developed the notion of philosophy through the articulation of his spokesperson, Socrates. Most of Plato's dialogues consist of Socrates discussing various topics with many of the famous sophists of his day. In each case, Socrates, who claims to have no wisdom, ends up showing the 'wise' through argument that their wisdom has no integrity. This, of course, stirs up a lot of hatred against Socrates and he ends up being executed in his old age by a gang of angry statesmen and sophists that he embarrassed on several occasions. However, he had a large group of followers who, through following the path of philosophy with Socrates, gained a great philo for each other. Many of the discussions therefore took place about the nature of love, which is the essential human condition in relation to Sophia for which it strives.

This comes out most strongly in the dialogue called Symposium. In this dialogue, in a scene that takes place in Athens after a festival, each of a number of guests at a party makes a speech in honour of love. All the speakers make very beautiful and lofty speeches, extolling Love as being the most beautiful among the gods and the greatest gift bestowed upon mankind. Socrates, the last speaker, surprises everyone in speaking of love not as overflowing goodness, but rather as a child of poverty. Countering the speeches before him, he refers to love as a state of great destitution, a mad desperation for its object, the beloved. It is therefore not a rich condition, but one of the poorest of the poor, for one does not have what one most desires. Following from this, he argues that mankind does not constitute creatures of fullness; we are creatures of endless desire, and our profoundest and most troubling desire is the desire for Sophia. Sophia for the Greeks refers to absolute beauty, justice, and goodness, and by 'absolute' I mean to say that which is 'at rest'. This striving for 'wisdom-at-rest' is therefore the essential nature of love.

The fact that we do not possess Sophia, but instead live in an adventurous striving for it, is Socrates' great challenge. To understand human affairs we must see each one of us not as perfected godly beings, but strivers in the madness of love, and that the gulf that separates us and the absolute rest in wisdom we seek is very large.

Now we may raise the question: for what reason did the sophists and statesmen of Athens sentence Socrates to death? As Plato's dialogue Apology shows, the outward courtroom reasons were a farce. The true reason was envy. They were envious that Socrates had captured the hearts and minds of the youth of Athens, and that he charged no money or asked no favours in return. But why, if Socrates asked for nothing in return, should his actions arouse such envy? Did we not just say that the human being's nature is not wisdom but love that loves wisdom? Surely, the truest nature of the sophist is also love, and therefore should not even the sophist rejoice in the man who punctured his balloon of pretension to wisdom?

Plato's answer to this is that love is a very hard master. Imagining ourselves as great possessors of wisdom stokes the fire of the vice of pride, so that our being becomes given over to possession, the avaricious element, rather than love, which constantly spends and exhausts itself into poverty for the sake of the beloved. The human race may have been created as lovers, and our essence indeed may be that, but the difficulty of that constant state of lack, of want, can be so pleasantly hidden behind our imagination of ourselves as wise beings, that we give ourselves over to possession, and dim the philo at our core. And we may subsist that way for a time, strengthening the illusion, until Socrates comes along and sends us crashing down

into our basic poverty of spirit. This 'crash' becomes the bedrock of envy, and we wish to conquer or destroy that which reminds us of our poverty.

In the light of this Greek thinking then, envy is born from the self-hatred of living in falseness. That hatred then gets channeled onto the one who exposes that falseness, and envy is born. Such exposing may be done by a philosopher, or someone more beautiful than us, someone smarter than us, richer than us, anyone who belittles the proud high idea we have of ourselves that we strive to maintain.

The hard truth, as Socrates says, is that we are lovers. Why that truth is so hard to accept is the mystery wherein envy is born. Thus Pythagoras sought to base his *polis mathematikos* not on wisdom, but on the love of wisdom, and on guarding the humility of human nature and on keeping ourselves free from the destructive desperation of envy, the daughter of pride.

For Plato, the way to escape this destructive 'daughter' is by learning to live with love. Not the ideal higher love which the gods possess, but the desperate impoverished love that is the core of the human being. Through learning about this love, we become friendly and gracious to it, and begin to humbly grant our fellow beings their imperfections. As Plato wrote in a letter when he was consoling an angry friend who had an injustice done to him:

Above all, be kind.
For everyone that you meet is going
Through a titanic struggle.

This struggle consists of course of the spiritual demands philo places upon us. Philosophy therefore becomes not only a love of wisdom, but of acquiring wisdom about love, for in knowing all the trials and tribulations that love and life brings us to, we eventually become at home in love, and it becomes not such a terrible master as it seemed at first. This is expressed at the end of a famous song of the English Renaissance, after the lover passes through all the trials of love and is finally granted godly wisdom:

Then securely Envy scorning
Let us end with joy our mourning
Jealousy, Jealousy still defy
And love till we die.

Reaching Out to Government Schools in Tamilnadu

Sumitra M Gautama and Suchitra Ramakumar

The School, KFI, Chennai has created a new methodology that seeks to build a link between knowledge and empowerment, to equip each student with the ability to think, to apply and to discover. We call this the Middle Schools Active Learning Methodologies (MS-ALM).

Methodologies for active learning may seem, from one point of view, to be possible only after the event—where active learning is, the methodology exists. Yet it has always seemed important to think about what frameworks and contexts invite active participation from potential learners, and what preparation institutions of learning must do, to awaken, nurture, and sustain inquiry. Given Krishnamurti's vision of learning, it is not surprising that the schools he seeded and helped grow, are keeping these concerns alive. It is, however, significant when a far-sighted leader in government and his team of committed teacher-educators, in collaboration with a Krishnamurti school, bring about a transformation in the structure and functioning of schools across a whole state.

Inception of the collaboration

Mr. Vijayakumar, State Project Director of the Sarva Shiksha Abhiyan in Tamilnadu [SSA TN], having heard of some of the innovations brought about at our school, visited us at the end of March 2007. Over five years, he had reworked the educational basis and classroom transactions at the primary school level across the state, in what was hailed as 'a silent revolution'. Now in search of a middle school pedagogy that would continue and sustain the focus on the learner, he had examined many different possible frameworks. On his visit to The School he sat in the circle of children in a middle school class during 'circle time' and observed the transactions in the classroom

carefully for a full hour. He and several of his colleagues held conversations with the teachers, the children and the Principal regarding what ideas could be taken forward and replicated.

Under its Outreach programme, The School had begun to consciously reach out and share, collaborate and extend itself. Some workshops had been planned and conducted for teachers from many schools, under the umbrella of Life Skills Education, between the years 2003–2005. Among these had been interested corporation school teachers from all ten zones of Chennai. This programme incorporated seven areas of exploration and inquiry for the teacher and student. [See Mind Map–Appendix 1].

In May 2007 we were now asked to conduct an eleven day workshop for SSA teacher-trainers or Block Resource Teacher Educators [BRTEs] to communicate and explore the possibility of incorporating new approaches to learning in middle schools across the state. In what turned out to be an amazingly egalitarian and participative process, the best learning practices in our middle school were accepted. These were later adapted and formulated for all state middle schools over the year 2007–08. For the teachers of The School who participated in this process this interaction proved to be immensely enriching.

Broad educational underpinnings: the journey of The School

In 1998–99, The School in Chennai had reorganized its primary classes, from Grades 1 to 4 into a multi-age format. Classes 1, 2, 3 and 4 were replaced with 4 mixed-age learning environments called Jamun, Mango, Peepul and Neem. There were many questions on how to address the persistent patterns of behaviour that teachers witnessed in the middle school as well. Many different approaches were tried in order to change the landscape of interactions between teachers and students. But the questions remained: how could one build and sustain autonomy, independence and initiative in learning? How could one affirm the dignity and innate intelligence of all learners?

Since then The School had embarked on a journey of finding out whether, through good design of the educational environment, a greater sense of purpose and energy could be drawn from the student. A key perception was that each student needed to be 'active' and not 'passive' during the transaction of academic learning. Another was that participation in 'constructing knowledge' was better than students largely acting as recipients. Universal

and well-researched contemporary understandings on the ideal learning environment came to underpin what later became known as the Middle Schools Active Learning Methodologies (MS-ALM) initiative. Many of these were initiated and tested in the middle school at The School.

During the academic year 2006-07, a pilot programme based on self-directed learning in mixed age groups was attempted at The School. The middle school Mixed-Age Group (MAG) programme had 29 students whose parents had volunteered to participate. The intention was to evolve a structure that removed obstacles that seem to have grown in the way of students taking charge of their own learning. In January 2007 the school decided that it would be worthwhile to proceed further in this direction by shifting the whole middle school into the MAG format. It was in this evolving scenario that the fruitful interaction with the SSA happened, and a new programme for the middle schools in the state of Tamilnadu—based on Active Learning Methodologies—took shape.

Parameters and principles for active methodolgies of learning

In evolving the framework for the ALM for government schools, the classroom, the textbook, the exam and the syllabus were taken as given. The rationale was that methodologies we chose would apply in diverse circumstances and contexts. We believed that creative inputs and in fact, learning itself, with all its lateral possibilities, was not a function of 'what' is taught as much as 'how' it is learnt. Moreover it was felt that providing an opportunity for the child to learn required few special aids, and large numbers in a class need not stand in the way of a child meaningfully engaging with her peers, in paired or small group learning activities.

While not contesting the knowledge that was mandated by the state board system, we anticipated that active learning methods would help avoid the usual pitfalls of encouraging rote-learning and privileging short-term memory, by creating a culture and framework of 'rehearsed' understanding: the idea being that within 90 minutes of class time, processes would be embedded that would allow the student to visit the content several times. There was to be a range of learning tasks, which included basic skills [reading, writing, listening, communicating, thinking] that would be used and reinforced in a phased and sequential manner. This was intended to build meaning and focus into the formal classroom interaction that the student has with her peers. In

evolving the pedagogic framework, the broad parameters of development in children were also thoroughly explored. An additional bonus of a learner-based methodology is that depth in learning would not be forced; quite naturally, the sum of the learning could exceed the total of its parts.

In fact, allowing a child to construct his own knowledge makes it possible for learning to happen even where there is temporarily no teacher for a particular class. Building capacity in children to formatively and critically evaluate their own work also saves the teacher endless corrections while ensuring accuracy in each child's learning.

We worked at child-friendly and realistic assessment formats (which are now beginning to be adapted and tested across the state). Perhaps the best part of the ALM was that it allowed room for all children's voices to be heard through discussions and presentations, and built enthusiasm for taking initiative. The beauty of the process lies in its simplicity.

Mind Map 1 in the Appendix contains a summary of the philosophy underpinning the MS-ALM.

Preparation for organization

Once it was clear that there was widespread acceptance of this framework from teachers and students alike, and a Government Order was passed to encourage its practice, the SSA-TN entered into a Memorandum of Understanding with The School to gather support for the work regarding ALM to move ahead. Trainers from SSA started visiting The School and working hard to generate the framework of lesson plans to enable active learning to happen in the classes. To support SSA trainers in taking the next step, a team of teachers from The School provided guidance and support, and English, the sciences and social studies were taken up in the first phase. Mathematics was reserved for the year 2008–09, and path-breaking work has been underway. The trainers, numbering up to 15 on any given day, would work in The School and our teachers would interact with them. This enormous effort from the trainers, more than 2000 man-days of effort, honing the lesson plans for transference to teachers, was a major thrust of the academic year 2007–08. In addition, with the assistance of eminent scientists, The School has facilitated the running of a model Mobile Lab as a pilot venture.

Evolving the Framework

Two manuals were produced—one on the theoretical basis of the ALM and the other on the lesson plans. This incorporated the principles that underpinned the programme and also set out the details of the methodology to be adopted. The following aspects of the programme were detailed: skills, curricular frames, lesson planning, monitoring, assessment and testing, value education as well as curricular enrichment. Lesson plans include both chapter plans and unit plans. A lesson plan is broken up into various units based on the time available. For example, a lesson titled 'Photosynthesis' may be transacted for a duration of time (say 90 minutes), thrice a week, for two weeks. Each transaction is titled a unit. In this particular example, there are six units of 90 minutes each. The learning cycle for any given unit of study is divided into well-defined phases: introduction, understanding, consolidation, reinforcement, assessment, remedial. For each of these a wide range of processes have been identified, that the teacher may draw upon judiciously. The mandatory elements for teacher and student have been woven together in four different formats to enable a variety of strategies and methods of presentations.

The mandatory elements for the student include:

1. Reading: implies underlining key words and finding the meanings of unfamiliar words.

2. Raising questions.

3. Drawing mind maps.

4. Summarizing in any of the formats suggested in the student tool kit.

5. Discussion in

    - Large Groups-----all students
    - Small Groups-----3 or 4 students, maybe 5
    - Pairs----------2 students

6. Writing.

The same technique can be used both passively and actively depending on the orientation of the teacher. However carefully a lesson plan is articulated, the teacher must clearly be rooted inwardly in facilitating an 'active' learning for the student. Great attention must be exercised in watching for passivity creeping in.

As the ALM manual also says: *Children gain confidence if they are able to accomplish what they set out to do. Instructions are given to help people perform tasks or fulfill roles. It has been clearly understood that no instruction can be so precise that another cannot make a mistake. This is another reason that active learning gains significance. Learning to do something is only through doing it. One starts with an idea and then during implementation, one may fumble a bit. Then one gains proficiency through repetition. Part of resourcefulness is to give oneself permission to fumble. The other aspect of exploration that one needs to understand is the boundary of safety for oneself and others. Being resourceful is to be able to try something that one has never done before, with confidence and caution.*

Mind Map 2 in the Appendix contains a depiction of the main pedagogical principles and processes underlying the MS-ALM.

Creating an atmosphere of learning: the role of the teacher

Krishnamurti asks, in *Letters to the Schools*, 'Are you creating that strange atmosphere where learning takes place?'

This role actually requires that the teacher be differently active—evolving and transacting frames of learning that include the learner transparently. This also requires that the teacher keep avenues of learning alive, while being well prepared for what will happen in any particular class.

How were the teachers from schools across the whole state to be prepared for such a role? How would they imbibe the principles and spirit of the MS-ALM programme? Here we have a narrative, constructed from feedback received, that gives us glimpses into the means of communicating and dimensions of teachers' 'learning by doing', that the SSA teacher educators attempted to put into place.

A Teacher's Narrative

I am a government school teacher in a village school in Tamilnadu. I teach in the middle school.

In July 2007 I was called for training. The government regularly organizes training programmes for teachers. I was wondering what this one would be like. There was a lot of excitement in the air. The BRTEs of the SSA were conducting the programme. It was a pilot module that was going to be tried out. As the training started, I learnt a lot of new things.

- *Active learning meant that children did not sit passively in a classroom but actively engaged with their lesson in many different ways. I learnt a lot about this age group, their developmental tasks, the nature of learning itself, and the link that all this had, with ALM.*
- *I learnt that constructivism meant that children constructed their understanding.*
- *I learnt about individual and group processes, and classroom techniques.*
- *What was also amazing was that there would be randomized presentation of what students discussed in their small group—not just by the best child and not occasionally, but in every unit!*
- *There was a range of teaching-learning strategies—not resource intensive at all.*
- *There were so many possible activities and formats for assessment!*

I struggled to accept some things the BRTE spoke about—that teaching did not mean that learning happens. I quickly understood that I was no longer going to be the centre of a classroom. That also left me with mixed feelings. How would my role be redefined in this new system? I was given a template of a lesson plan. All periods were now of one and a half hour duration—that seemed a major shift in itself—and units were planned on that basis. I came back excited and apprehensive. Anyway there was no harm trying it out. I went to class and followed my instructions meticulously.

The response was amazing—all children actually read every bit of the lesson—if not by themselves, then with a friend. In this methodology we could pair a student who could read with one who could not. (Of course, I had done that myself on many occasions). The lesson had been broken up into small segments and in one class children did not have to read more than 3–4 pages. That chunking was very helpful. I introduced mind mapping. That, I can tell you, was such a hit. I never realized how well all children can visually design and represent what they know. They drew and drew and did not want to move on. I did not have to coax, cajole, threaten or scold. In fact I had difficulty stemming the enthusiasm. They then shared their mind maps in small groups and also came up

with a small summary. I needed to be very alert, to stick to the time boundaries. There was such a clamour to present. I realized that every child could have an opportunity to present his/her group's work. They had got most of the main concepts and I had to add very few. We then had a small memory game and then got down to writing some of the answers to the questions given at the end of the chapter that were given in the textbook. They were to complete that for homework. I went home strangely tired—I wondered why. The day had been different, and I wondered what the difference had been.

Soon further training sessions came my way. I was eager to meet other teachers and share my experiences and questions. We were well supported by the BRTEs. There were also interesting EDUSAT classes. Perhaps what is best is that though I talk less in the classroom, the children learn more…and my questions count!

What we have learnt

At our school this whole venture was seen as a special and valuable opportunity, and the support to SSA was seen in the gaps in the timetable of a fully running school. Working and practising teachers took on the additional work in their free slots. For those of us who worked with the BRTEs of the SSA it has been a year-long lesson in humility. This process has reiterated the enormous enrichment value of good consultative process. We have perhaps also learnt the importance of a sustained, disciplined and meticulous approach to preparing a good lesson plan—that no good or creative idea, however original, can be arbitrarily introduced. Nothing could have prepared us for the extraordinary responses from the trainers, teachers and students we encountered, the enormous energy of a vibrant mainstream intervention.

Issues related to state and central government educational structures—pedagogic and social implications

The present move rides on the strong case for social justice in which schools have an important role. After the noon meal schemes, now government schools may be getting ready to say that 'every child has a right to actively participate in knowledge creation and construction'. The winds of change have blown away many myths:

- The underprivileged need educational opportunities that are different from the privileged.

- Good education can only happen with heavy infrastucture and excellent facilities.
- Government schools and private schools have little in common.

The sharing of the ALM processes proved, with refreshing simplicity, that what works among children in a private school can work equally well in government schools; in fact, better! The horizontal transfer of the processes also gives great energy to the reverse possibilities—of private schools learning from the movements in government schools. Nothing could be more precious in our times. When divisions are gaining prominence, to discover the truth that all of us are human and similar, and the same processes work well with all of us, is valuable to perceive. And probably nothing holds more promise for the creation of a level playing field, than such simple processes in education, held consistently and humanely, focused on unleashing the learner.

For The School, what began as a journey towards discovering more meaningful educational parameters has taken us further than was ever expected. It is a fulfilling thought that thousands of children in remote corners of the state are using processes that this school uses with its children.

The way ahead

None could have expected this work to spread so far, so quickly. One cannot but marvel at the remarkable movement in Tamilnadu government school education. The structure has been transformed and the bar has been raised. How many children in private education actually have an active school day? How many schools have discovered the special chemistry between educational strategy and individual will, needed to lead a class without using heavy authority and fear? And how many children get to participate actively in the creation of knowledge and understanding in the classroom?

Yes, when a private school shoulders responsibility for reaching out to government schools, there is so much that can be achieved: one could call it a silent revolution. Like all revolutions it promises to upturn the status quo and many assumptions of the older order. Ten thousand middle schools across Tamilnadu underwent a dramatic, refreshing process in one year with teachers, trainers and students encountering easily learnable processes through

the ALM. It is the rare privilege of Krishnamurti Education centres to have been part of this movement.

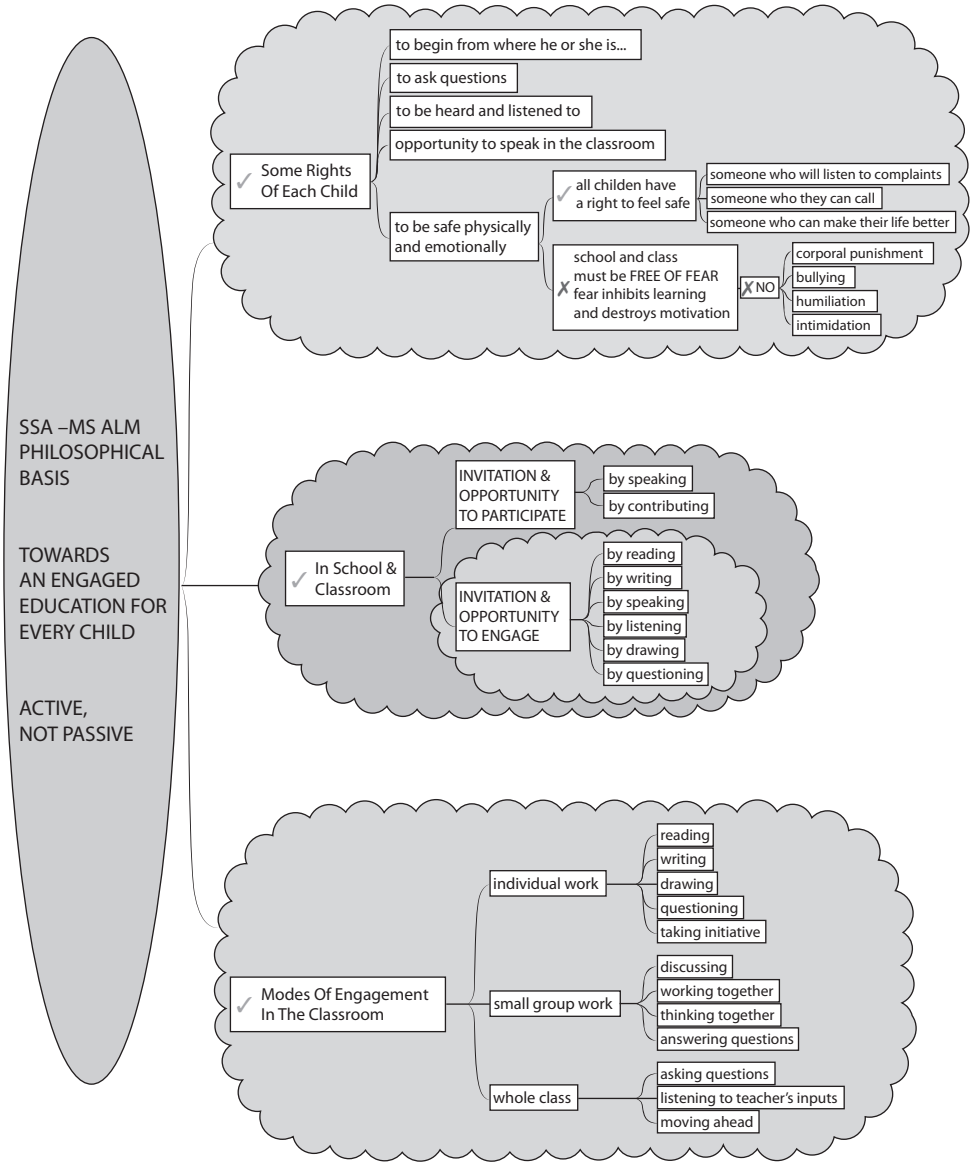
Quality school education in the world's largest democracy is surely an achievable dream today.

In conclusion

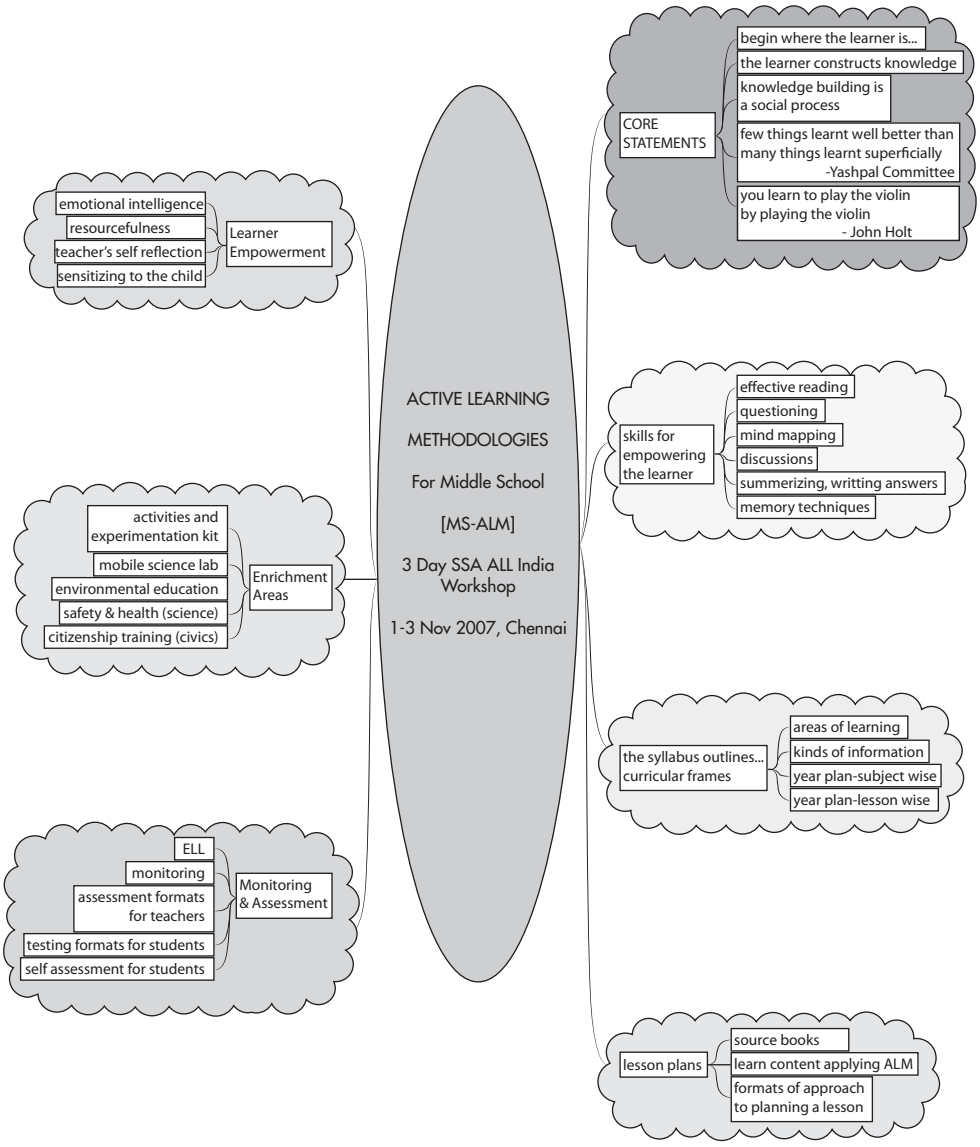
This work was reviewed by the Seventh Joint Review Mission in 2008. The following is a relevant extract from its report.

Popularly recognized as ALM by the educational practitioners at upper primary level, the method involves the active engagement of the student in constructing knowledge. The innovation was developed with the help of 'The School' of KFI and involves major changes in the classroom processes emphasizing the importance of the engagement of the learner with the sources of knowledge and not as a recipient of information from the teacher. In order to ensure its acceptability in the ongoing system of education at the upper primary stage, the changes in classroom processes have been anchored to the existing textbooks while allowing the teacher to guide students in critiquing the knowledge contained in the 'text'.

Mind Map 1


SSA –MS ALM PHILOSOPHICAL BASIS
TOWARDS AN ENGAGED EDUCATION FOR EVERY CHILD
ACTIVE, NOT PASSIVE
Some Rights Of Each Child
to begin from where he or she is...
to ask questions
to be heard and listened to
opportunity to speak in the classroom
to be safe physically and emotionally
all childen have a right to feel safe
someone who will listen to complaints
someone who they can call
someone who can make their life better
school and class must be FREE OF FEAR fear inhibits learning and destroys motivation
NO
corporal punishment
bullying
humiliation
intimidation
In School & Classroom
INVITATION & OPPORTUNITY TO PARTICIPATE
by speaking
by contributing
INVITATION & OPPORTUNITY TO ENGAGE
by reading
by writing
by speaking
by listening
by drawing
by questioning
Modes Of Engagement In The Classroom
individual work
reading
writing
drawing
questioning
taking initiative
small group work
discussing
working together
thinking together
answering questions
whole class
asking questions
listening to teacher's inputs
moving ahead

Mind Map 2


ACTIVE LEARNING
METHODOLOGIES
For Middle School
[MS-ALM]
3 Day SSA ALL India Workshop
1-3 Nov 2007, Chennai
Learner Empowerment
emotional intelligence
resourcefulness
teacher's self reflection
sensitizing to the child
Enrichment Areas
activities and experimentation kit
mobile science lab
environmental education
safety & health (science)
citizenship training (civics)
Monitoring & Assessment
ELL
monitoring
assessment formats for teachers
testing formats for students
self assessment for students
CORE STATEMENTS
begin where the learner is...
the learner constructs knowledge
knowledge building is a social process
few things learnt well better than many things learnt superficially -Yashpal Committee
you learn to play the violin by playing the violin - John Holt
skills for empowering the learner
effective reading
questioning
mind mapping
discussions
summerizing, writting answers
memory techniques
the syllabus outlines... curricular frames
areas of learning
kinds of information
year plan-subject wise
year plan-lesson wise
lesson plans
source books
learn content applying ALM
formats of approach to planning a lesson

Exploring Krishnamurti's Insights

Kabir Jaithirtha

Beauty

The perception of beauty is an essential aspect of the teachings of J. Krishnamurti and has deep implications for education. Just as the development of the intellect can be easily confused with intelligence we too readily assume that the awakening of a sense of beauty has to do with the cultivation of an aesthetic sense. An aesthetic sense may be part of the nurturing of beauty but may not encompass the whole of it. It seems to me that Krishnamurti refers to it in the sense of an awakened sensitivity which is able to perceive without the interference of thought. This perhaps leads to a relationship with the world around without a barrier. It also implies a certain level of vulnerability. It seems to be connected to a sense of order, of goodness and love. Thus the nurturing of a sense of beauty is of utmost importance. Without it life indeed becomes rather drab and perhaps the need and craving for incessant pleasure comes out of this lack of a sense of beauty.

A sense of beauty, in the way Krishnamurti uses it, has a 'completeness' about it. Perhaps the exploration of beauty can happen in two distinct ways. It seems to me that the modern mind explores beauty primarily in terms of the self: its reactions, its experiences, and its ability to conceptualize what has been perceived. The intellect plays a predominant role in the engagement with the world. Though the senses play a role in the whole exploration of beauty it is the intellect that shapes and guides the whole perception. However, Krishnamurti is talking of a sense of beauty in which thought has no role to play. Indeed he says that beauty is when the self is not. In eastern cultures there was once an exploration of beauty free of the self. One hears of sculptors staying with a piece of wood or stone till the sense of self disappeared and then picking up the tools. Even in Indian classical music, there is the ideal of allowing a raga

to reveal itself, rather than the musician imposing on it a form born merely out of training and memory.

What then is the role of training? What relationship does it have to awakening a feeling for beauty? Does training support or hinder the feeling for beauty? This question is perhaps related to the question of whether knowledge, and freedom from knowledge can go together. The state of mind which is free of knowledge can hold knowledge in its right place. Nor do these operate merely as parallel streams. This idea needs some elaboration. Freedom from knowledge does not imply amnesia. It is an act of attention in which knowledge does not interfere and therefore something new can happen. Similarly the mind which is sensitive to beauty can hold training and knowledge in their right place. To awaken this sensitivity to beauty, one starts, not with training or activity, but with observation and silence. The observation is of the bird, the tree and the cloud and later of the movement of thought. Without this quality of beauty filling the heart and the mind, the mind turns to the seeking of pleasure and stimulation through the senses rather than the awakening of the senses.

All this may sound very difficult and impractical but that is perhaps because we do not think it is important enough. Life seems to go on after all without a supreme sense of beauty and there are more urgent matters which preoccupy us. The immediate, as always, seems more urgent than the eternal. Krishnamurti has said that only with the abandonment of the self does the passion of beauty come into being. Beauty is not merely the outward expression of form, colour, shape or sound, but the nature of a mind free of the sense of separation which is expressed as the self. He has also said that beauty has no opposite. How does one perceive that which has no opposite? Thought can only perceive through opposites: through comparison and definition. The perception of something which has no opposite is a perception free of thought and free of division as the 'me' and the 'other'.

All this seems very far but one begins with the very near: with 'choiceless' awareness of colour, sound, shape, light and shade and the movement of thought. That is why 'beauty is dangerous to the man of desire'. I doubt if it can be found by immersing oneself in varied experiences or trying to change one's way of perception through drugs. We are willing to experiment in those ways but not through the act of being aware of our thoughts and reactions and feelings. Thus the craving for experience seems to be overpowering and

beauty is seen as indissolubly linked to experience. For Krishnamurti it is freedom from experience, with the senses being fully awake and the mind being passively attentive.

Freedom and Order

Freedom, order and discipline are recurring themes in the teachings of Krishnamurti. Perhaps most of us conceive of freedom and order as inevitably in opposition to each other. We talk of the balance needed between order and freedom. To us chaos lurks behind the demand for freedom. The longing for freedom is deeply restricted by the fear of disorder. It is fascinating to see the struggle to sustain the concepts of freedom and order and hold them simultaneously in our minds. The starting point for me has been the clear understanding that freedom and order are one movement. Freedom is not merely the freedom to choose. Choice is anyway dictated by past experiences, likes, dislikes, habits and patterns and in that there is no freedom. We often begin to argue through a confused use of language. I don't choose to refrain from putting my hand into fire. Intelligence negates that action. In taking that decision there is no choice, though thought may articulate it as such. Going deeper, there is no choice involved in not moving into a state of isolation through creating a barrier. Again intelligence shows the meaninglessness and danger of such activity and it is negated. This is not the action of thought but of perception and in it there is no choice.

Seeing that choice does not mean freedom, allows for the perception of the nature of freedom; to listen, to see and to observe. Freedom is this listening, looking and observing without the distorting factors of pattern, idea and conclusion. Since these are essentially the ground for disorder, freedom and order are indeed one movement. I am sure many will feel that all this is theoretical and abstract and does nothing to help address the issues on the ground. But I feel it is utterly essential to see that there is no dilemma between freedom and order, otherwise order is always seen through the framework of control. In fact the dilemma of freedom and order is really the dilemma of freedom and control. We assume the exercise of control is necessary to create and maintain order. As long as we have this as the primary means we will use it to different degrees, relying on our common sense and innate kindness to ensure that control never becomes oppressive. But control can never give the flavour of freedom just like a benign patriarchy never gives the same environment as genuine equality does.

Only in putting aside control does the mind open itself up to the other ways of creating order in which freedom is not compromised. What is being talked about is obviously not applicable to large institutions and systems, but then large institutions and systems are rarely concerned with freedom and order and goodness, but with control and output. But the primary concern of a school is, or ought to be, freedom and order—without which goodness cannot flower.

Order perhaps is not something to be maintained but has to be renewed from moment to moment through relationship and dialogue. Perhaps we look for a situation where things are put in order and remain in order. This may happen with inanimate objects but not in a living relationship. We need to keep in mind that the very movement of learning creates its own discipline. Thus dialogue at many levels becomes imperative. It cannot be only in the context of certain situations. What is needed is an ongoing dialogue about the nature of freedom, order and discipline, so that larger universal perspectives are always linked to the particular. The student begins to sense the quality of freedom and order and begins to relate it to his own life and to the contexts in which he lives.

All this requires great attention and sensitivity on the part of the adults and a patience which is not merely a willingness to wait longer for a result. Learning, which is its own discipline, must flower in an atmosphere of dialogue and relationship. A culture of freedom and order can be sustained in a school through attention which is renewing itself from moment to moment. It is inattention that demands an order that can be archived and frozen through innumerable rules and consequences. With attention as the source, there is a place for rules which is really the common understanding among large numbers of individuals who have to work together in cooperation. This has to be reiterated with endless patience because there is always a new group of students, or a new situation, or the renewal of attention which has slipped into inattention. 'How many times do I have to do it?' is the reaction of an impatient, inattentive mind.

The very creation of order becomes a movement of learning for the teacher and the student. Can the adults pre-empt situations? Can the adult never take recourse to 'policy' to ward off questioning? Can the students be involved in the creating of common agreements and understandings? Can the students be involved in the responses to breaches of trust and broken

commitments? And can we take a re-look at the unnecessarily rigid structures we create more for our convenience as adults than for the nourishment of an atmosphere of order and freedom?

Contributors

O. R. Rao
Krishnamurti Foundation India, Chennai

Kanthi Phatak
The School KFI, Chennai

Siddhartha Menon
Rishi Valley School, Andhra Pradesh

V Arun
The School KFI, Chennai

Keerthi L Mukunda
Centre for Learning, Bangalore

Tanuj Shah
Rishi Valley School, Andhra Pradesh

N Venu
Centre for Learning, Bangalore

R Venkatesh
Rishi Valley School, Andhra Pradesh

Ruth Chandy
The Valley School, Bangalore

Shabari Rao
Centre for Learning, Bangalore

Dr Kalpana Venugopal
Regional Institute of Education, Mysore

Stephen Smith
Educationist, Ojai, California, USA

Dr Ashna Sen
Brockwood Park School, UK

Brian Edwards
Brockwood Park School, UK

Sumitra M Gautama and
Suchitra Ramakumar
The School KFI, Chennai

Kabir Jaithirtha
Rajghat Besant School, Varanasi

Addresses of Schools

Bal Anand (KFI)
Akash Deep, 28 Dongersey Road
Malabar Hill, Mumbai 400 006 India

Brockwood Park School
Bramdean, Hampshire SO24 OLQ, UK
e-mail : admin@brockwood.org.uk
website: http://www.kfoundation.org

Centre For Learning
545, Banagirinagar, Banashankari III Stage
Bangalore 560 085, India
Tel: (080) 7748048, 7748049
e-mail: info@cfl.in
website: www.cfl.in

Rishi Valley School
Rishi Valley P.O.,
Madanapalle, Chittoor District
Andhra Pradesh-517352, India
Tel: (08571) 280622, 280582, 280044
e-mail: office@rishivalley.org
website: www.rishivalley.org

Rajghat Besant School
Rajghat Fort, Varanasi 221 001
Uttar Pradesh, India
Tel: (0542) 2430717/ 2430721/ 2430336
e-mails: kfivns@satyam.net.in and
kfirvns@nde.vsnl.net.in
website: www.jkrishnamurti.org

Sahyadri School
Post Tiwai Hill
Taluka Rajgurunagar
District Pune, Maharashtra 410 513, India
Tel: (02135) 325582 / 325971 / 288442
/ 288443
e-mail: sahyadrischool@vsnl.net

The Oak Grove School
P.O.Box 1560, Ojai
California 93023, USA
e-mail: office@oakgroveschool.com
website: http://www.oakgroveschool.com

The School KFI
Damodar Gardens
Besant Avenue, Adyar
Chennai 600 020, India
Tel: (044) 24915845
e-mail : theschool.kfi.chennai@gmail.com
website: www.theschoolkfi.org

The Valley School
'Haridvanam', Thatguni Post
17th km, Kanakapura Main Road
Bangalore – 560 062, India
Tel: (080) 28435240/28435241
/28435030
e-mail: thevalleyschool@vsnl.net

Our websites: www.kfionline.org
www.jkrishnamurti.org

Designed and typeset by Crimson, 2/579, Singaravelan Street, Chinna Neelangarai, Chennai 600 041.
Printed at The Indcom Press, 393, Velachery Main Road, Vijayanagar, Velachery, Chennai 600 042.
Cover printed on recycled paper.

ORDER FORM

JOURNAL OF THE KRISHNAMURTI SCHOOLS
No. 13, January 2009

Please accept my order for the Journal of the Krishnamurti Schools:

Name .....
Address .....
.....
.....
.....

☐ No.13, January 2009 Rs.120 / $ 5

☐ No.14, January 2010 Rs.120 / $ 5

Amount remitted .....
(For outstation cheques please add Rs. 25/- towards Bank Charges)
Mode of payment (✓) in favour of 'KFI Publications' payable at Chennai

☐ Cheque ☐ DD ☐ Cash

☐ Banker's Cheque
(for Foreign Remittance)

Date Signature

Mail to:
KFI Publications, Krishnamurti Foundation India
124, 126 Greenways Road, R A Puram, Chennai - 600 028