LearNing CURVe

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# From Azim Premji Foundation

Every person I have spoken to in the context of the controversy on "reservations" has agreed that as a nation, we must do everything that is required to achieve equality in our society. Not a single sensible person would deny the fact that for too long in our country, grossly unequal, inhuman and unjust treatment has been meted out to people - based on socio-economic class and caste. It is a complete travesty of justice that even in the 21st century, in a large number of towns, decisions are made for people based on the caste they were born into.

I have been watching several debates and programs on this issue for the past several months and realize, that to begin with, there is a huge ignorance on the issue. Even highly educated and socially aware people do not know the fundamentals of the issue. I recently asked a senior journalist friend of mine what she felt on the issue. In reply she narrated a conversation that she had with her mother. Her mother told her, "If the poor people are asking for it why don't we give it to them?" (Does it sound condescending?) My friend told her mother, "but when Sunita (her 4 year old daughter) grows up, she may not get admission in the higher education institutions". Her mother quickly retreated saying, "then we should not do it". Thus people's perception of how it is going to affect them directly is influencing their view on the subject.

Most people debating this issue have neither read the relevant constitutional provisions nor read the Mandal Commission report that they often cite.

However, to my mind, all these are technicalities. The real issues are "How can we treat another fellow human being differently?" "Don't we have the responsibility to eradicate all injustice that has been and is being meted to the disadvantaged?" "Who really made them disadvantaged?" "Shouldn't we take concrete steps to compensate for all the inequities and injustice that have been done for years together?"

I was most disturbed with the experience I faced in one of the schools in a remote area. I asked a fourth standard boy to show me his notebook. He was about to hand it over to me when another boy came from behind and pushed his notebook in my hand. He also said something in Kannada that I did not understand. I saw the teacher scolding him profusely. Later the teacher explained to me that the boy was refraining me from taking the note book of the other boy since he belonged to a lower caste.

I think we should stop talking about this subject and start acting. It has to begin right from the school and must be visibly reflected everywhere. What we need is not merely a corrective act but solid positive discrimination. Every teacher and every child in the school must be sensitized to the issue as appropriate to the stage of understanding. The text books have to be specially oriented towards discrimination in favour of the disadvantaged. It has to be reflected in the pictures, content, language used and the questions asked.

It is in this context that the 3rd National Learning Conference scheduled on 24th to 26th May 07 by Azim Premji Foundation, in collaboration with the Ministry of Human Resource Development (Government of India), has special importance for the overall vision of the Foundation. In this conference, we hope to create a platform for expression of people from several walks of life and wide views on the issue of "equity". May be it is difficult to achieve consensus on the actions but we are confident that the minimum we can achieve is shared understanding on the subject.

We look forward to having many of you at the National Learning Conference!

*Dileep Ranjekar is Chief Executive Officer, Azim Premji Foundation.*

## CONTENT

# GUEST COLUMN

## Kuruvamma: tomorrow's scientist

*S. Ramanujam*

*The world of science should bolster the self respect and confidence of a student*

"Hundred degrees!" The chorus is loud and clear. I am watching to see that practically every child in the class has joined the chorus. We have been talking about water, and I have asked them what they understand to be the boiling point of water.

"Sure ? Not 98 degrees ? Or even 102 ?"

"No sir, it is hundred !"

"Hundred degrees what ?"

Only a few children answer now, but others join to repeat: "Hundred degrees centigrade".

I pause, look around, until all children look at me and ask softly: "How do you know?"

Many don't understand, some do. Some children giggle.

The discussion proceeds and it is clear that they are repeating what they have heard or read in the textbook. Many children in the class have seen a thermometer, and some have even used one to check body temperature. But does the clinical thermometer have 100 degrees Centigrade on it? They do not know.

Everyone accepts that this fact is easily verified experimentally, and that it is necessary to do so for it to be accepted as a fact "scientifically". How easy is it to do the experiment? There is some discussion about where a thermometer can be found, whether it can be borrowed etc. I extract a promise that they will get together and do it.

Then I tell them: "I have tried it several times and in many places and I have NEVER got 100 !"

The children are stunned. One girl ventures: "Not even once?"

"No, not even once. But I never got 75 or 120 either. It was always between 97 and 102".

After some discussion we get to well water, pond water, and how it is never "pure" water. It takes some effort to understand what books mean when they talk of the boiling point of water being 100 degrees Centigrade.

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This was an interaction in a village school, and the programme was called "Meet the scientist", where the children were mainly curious to see what a scientist looked like and talked like. Many were surprised (and some disappointed) that I spoke of such mundane matters and not of "latest discoveries".

Late afternoon, I take a walk in the fields nearby, accompanied by a bunch of bright and chatty children. My guide in chief is 12 year old Kuruvamma. Daughter of an agricultural labourer, she is amazed at my inability to identify most plants, some trees, many birds. She shows me which crops are planted where, and which should be grown next to which. She uproots plants, shows me the fine network of roots. There are some medicinal herbs, she picks some of the leaves for me, explains how I must use them.

Kuruvamma is at her best talking about plants, but there is one "problem" for me. She is convinced that all the material for making a plant comes from the soil, air plays little or no part. I try to explain, but it is awkward. Nitrogen fixation only makes her eyes glassy, and I give up.

We pass by a "shop" where jaggery is being made, and Kuruvamma gets me not only fresh sugarcane juice to drink but also some molasses to taste.

That night, the sky is resplendent. For a city man like me, used to citylights blurring the sky, this is a rare treat.

Kuruvamma is back at my side, and we point to constellations. She calls out the names of many, and I know them all, but not by the same names as her.

When it is way past time for her to go and sleep, I bid her farewell, I would be off early in the morning. I wish her well, tell her she will make a good scientist some day.

Kuruvamma's laughter rings out. "Science, sir? I never get more than 30 in science!"

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Science is a `compulsory' subject for the first ten years of schooling in India. We strive for universal schooling and insist that every child must learn science for ten years. Such a societal consensus clearly has some sound basis and clear expectations, though looking at any classroom, it seems quite hard to fathom that basis.

We should remind ourselves that it wasn't always like this. The 1968 National Policy on Education of the Indian Government was the first to suggest making mathematics and science education compulsory for ten years in school. This was confirmed by the 1986 Policy on Education as well. The latter argued for strengthening science and mathematics education, because, all areas of development are science and technology based and for that we need experts, middle-order workers and scientifically literate citizens". It specified how the

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curriculum should be designed: “Science and mathematics curriculum will be designed for the secondary level for conscious internalization of healthy work ethos. This will provide valuable manpower for economic growth as well as for ideal citizenship to live effectively in the science/technology based society".

An interesting formulation there, and rather different from the tone one encounters in the National Curriculum Framework 2005 document. The latter says that science education should enable the learner to "acquire the skills and understand the methods and processes that lead to generation and validation of scientific knowledge". The emphasis is on processes, i.e., experimentation, taking observations, collection of data, classification, analysis, making hypothesis, drawing inferences, and arriving at conclusions for the objective truth. It speaks of cultivating "scientific temper".

In either case, what is very clear is the huge gap between the perceived goals of science education and what actually takes place in the classroom.

More significantly for this discussion, does Kuruvamma have any hope of joining the "experts, middle-order workers and scientifically literate citizens" that the former vision calls necessary? Or can Kuruvamma expect to understand the processes of science, internalize them?

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Today, we expect that the state guarantees the right to education for every child, and provides mechanisms for every child to access and participate in education till the age when she or he may enter the labour force. We further expect that a uniform curriculum and pedagogy, determined by social choice and ensured by social means, be available for every child. At the heart of such social constructions has always been the conviction that universal education is an instrument for social equity. Indeed, early struggles for universal education articulated social equity as the main justification for such a demand.

In India, science education operates in another dimension as well. The advent of mass education and western models of science education in this country was accompanied by an `enlightenment' mood. Science was seen as an important weapon in the battle against forces of obscurantism and superstition. Therefore science education was seen as an essential component of modernization and social transformation.

However, it does not take deep research to point out that the structure of social inequity, and its mechanisms of perpetuating inequity, are manifested in our schools, and science education, far from becoming an instrument of social transformation, merely reflects inequity. In terms of academic performance, which is the passport to economic upliftment, Kuruvamma has no hope of "becoming" a scientist. In terms of processes that encourage critical thought, that lead Kuruvamma towards freedom from fear and prejudice, school science seems to be of no help whatsoever.

Kuruvamma's identity as a rural dalit girl is not incidental to this discussion. That she is a first generation learner, that there are no books at home, let alone gadgets like pressure cookers, is relevant. That her school has no library nor laboratory, is important.

Kuruvamma is doubly impoverished: on the one hand, the idioms of modern urban science learning are alien to her -- no books on space travel, no newspapers speaking of Kalpana Chawla or Sunita Williams, no planetaria, no "science city", no internet, little access to new technology or its products. The state supplied text book is her sole link to formal science, and experiments are at best seen from a distance once in a few weeks, and at worst non-existent.

On the other hand, whatever Kuruvamma does know is rejected as not being science. Her extensive familiarity with the world around her, her hands-on experience with all processes around her, her ability to make things grow, to shape things and to connect to nature, are considered irrelevant. In school, she learns that whatever science might be, it is not something she is at home with.

It should be emphasized that Kuruvamma does need modern science, the secrets that books hold. She needs to travel beyond experiential learning which can often be superficial. All experience teaches her that matter is destroyed during burning, and she needs to develop a deep conviction in the law of conservation of matter. Kuruvamma needs to be invited into the fascinating world of science, but in a way that builds her self respect and confidence.

Kuruvamma needs, even more, the language of science that insists on quantification.

Kuruvamma *can* make a good scientist one day, but *will* she ? Chances are, she will not. Unless we take social equity in science education seriously indeed.

*Prof. Ramanujam is a professor of Computer Science at Institute of Mathematical Sciences, Chennai.*

# GUEST COLUMN

## Let's talk of a collective vision of education…. access will follow

*Prajayatna documentation unit*

*Can we involve ourselves in a meaningful dialogue of the purpose of education and the action that follows therein?*

The lack of access to education is traditionally understood as barriers - physical, financial, or sociological - that prevent a child from participating and benefiting from the existing educational process. These barriers are commonly manifested as:

- Non-participation of girl children in schools due to societal prejudices and misplaced notions.
- Inability of children from minority and tribal communities and in border areas to participate effectively in the learning process, due to language issues.
- Absence of adequate number of higher primary and secondary schools close to the child's home. In several districts of Karnataka, access to only primary schools compels children to drop out when they reach higher primary or secondary levels due to various logistical problems.
- Inadequate infrastructure of the existing schools (insufficient rooms resulting in overcrowding) making the school unaccommodating for the child.
- Lack of adequate number of teachers and acute shortage of good quality teachers, making the school irrelevant and unattractive to children.

Notwithstanding the need to address these barriers, critical to the deliberation on improving access to education is the need to consider the efficacy of education being offered in the government schools.

In several instances, the dismal condition of government schools (primarily attended by children from low-income communities) and the inefficacy of education received translating into a meaningful life support tool or means of livelihood for the children has compelled parents to see little functional advantage of such schools over work. Quality in education is hence synonymous with access.

A key reason for this situation is the absence of engagement of the community with the school system. There is effectively no process or structure that enables the engagement of various stakeholders (parents, teachers, educationists, education bureaucracy, peoples' representatives, etc) in a transparent and equitable manner towards school development.

Though the issue of elementary education (and its various aspects including access) has been significantly deliberated upon over the last few years, the consequent 'solutions' have predominantly assumed the form of schemes and programmes 'for' the people. Seldom has it been looked upon as a *development* issue requiring to be jointly determined by all stakeholders.

It is only in recent years that community participation in school is being considered a 'good idea'. It is in fact a good idea, provided the community is perceived as a co-creator of a system; however, if regarded only as a superficial ingredient to disguise the inadequacies of a system, it will remain just an *idea*. Even now, the government retains the responsibility to initiate schools, appoint teachers, decide the curriculum, prepare textbooks, ensure dissemination, formulate and execute financial plans, etc; *….did someone say community participation was important?!*

If education continues to be a massive bureaucratic exercise of administering to thousands of schools - then access will remain an issue of initiating new schools, to fulfil the goal of universalisation. On the other hand, if education is regarded as an understanding of life and the environment around us, developing abilities to analyse issues that confront communities, focussing on skills, values, and perspectives that encourage collaboration and collective decision-making, then access will be about communities partnering in efforts to establish schools and finding real meaning in the content and process of schooling.

The basic question here is, to whom do the schools belong? Are we ready to involve all stakeholders in a more engaging way, and how? How equipped are we to involve ourselves in a meaningful dialogue of the *purpose of education* and the action that follows therein? How do we work beyond 'civil society' or 'state-based' approaches, to focus on their intersection, through new forms of participation, responsiveness and accountability? Are we also prepared to depart from a common state-wide policy for uniform financial allocation for infrastructure, pre-determined teacher training modules, uniform norms for opening of schools, homogeneous textbooks across regions, standardized 'community participation' training programmes?

If so, then we have a better chance to lay out the basic framework for access and related parameters. The result would also be a more binding platform for communities and

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the Government to jointly plan efforts not only to address physical access but also to strengthen the access to relevant learning. The perceptions of society about what constitutes learning in the classrooms would redefine itself as they gradually learn to engage with the education system. This certainly does not imply communities now writing textbooks; rather, communities trying to understand and make sense of the institution called schools - that develop their children's capabilities to understand their inner self and the environment around them.

Prajayatna, the education reform programme of MAYA working in eight districts in Karnataka and two in Andhra Pradesh evolved as a response to the fundamental question of who owns the school. It was recognised that communities, had no engagement with the system of which they were the primary stakeholders. Prajayatna facilitates processes by identifying structures for communities to participate, institutionalising the process of ownership, building their capabilities as accountable structures. These processes involve a certain kind of social mobilisation that creates the necessary environment for change.

In the districts where Prajayatna works, the stakeholders (parents, teachers, elected representatives, other civil society institutions) have jointly, through the various processes of Shikshana Grama sabha, SDMC network at the Gram panchayat level, made significant efforts to address the issue of access. This has been the result of a consistent and progressive engagement with each other and the education system.

Being an empowerment driven initiative, Prajayatna aims at a systemic impact; the emphasis is to facilitate conditions where stakeholder groups own and steer the process of education reform. It strengthens community governance structures at various levels wherein processes leading to structural changes facilitate a constructive environment for multi-level dialogue and movement towards altering learning practices.

Facilitating processes towards ownership of a vision manifests sometimes as improved infrastructure, or addressing teachers issues, or even enriching classroom learning processes. All these responses organically lead to the communities planning, implementing and reflecting on what they think about their school, what they can do, starting from where they are, leading them to ask questions of why and what they want to learn.

Though in several instances where communities' involvement in issues of access has translated into addressing physical, geographical and sometimes sociological barriers (for instance greater enrolment of girl children) the real challenge to access is the evolution of a schooling system that is empowering and inclusive of community decision-making where they are not merely participants but are the drivers of the entire educational process.

Let us therefore begin by asking, 'who owns the schools'?

*SUNTNOOR*

*In a Shikshana Grama sabha and a Gram Panchayat network meeting organised by Prajayatna….*

*The High School in Suntnoor GP headquarters, Aland taluk, Gulbarga district did not have a building of its own and had been functioning out of the Higher Primary school. 150 children from the high school were sharing the 9 rooms of the with 350 children from the HPS. Due to lack of space, smaller children were forced to sit out in the open. Following a Shikshana Grama Sabha (village level meeting on education) on this issue, the SDMC members along with some members of the community took the initiative in identifying a place (govt. land) and getting it registered from the gram panchayat for the high school. The high school has since been constructed and this has created a more conducive environment for learning of children in both the schools.*

*In the same GP, the Urdu school though initiated in 1999, had been functioning out of a temporary shed given by the Muslim community. Due to lack of space, a building had not been sanctioned for the same. The school was lacking in basic infrastructure due to which retaining children in the school was also becoming difficult. Following the Shikshana Grama Sabha, in a meeting with the Gram panchayat and the SDMC members at the Gram panchayat level (SDMC network meeting), land was allotted by the Gram Panchayat for the purpose of building a school structure. This has now been initiated and the land has been registered in the name of the school.*

*Prajayatna, or "Citizens' Initiative", is a statewide citizens' movement for creating systemic change in the educational system. Prajayatna seeks to enable community ownership of elementary education in Karnataka. Prajayatna works with communities, school committees, teachers, bureaucracy, elected representatives and officers of the Education Department across seven districts of the State of Karnataka to build lasting institutional structures that will facilitate community control over education.*

# GUEST COLUMN

## Education and the Arts

*Jayachandran Palazhy*

*Movement arts could be the single most important tool for nurturing the multiple intelligences of the child.*

Over the last twenty years of my career as a choreographer, dancer and teacher, I have had the opportunity to work in diverse contexts in several countries across the globe. Some of the most rewarding ones I remember were in the field of arts education where the movement arts played a vital role in the development of the individual. This is true of students ranging from nursery to post-graduation. Whether they came from a grammar school in East Anglia in the UK or a school for slum children in Chennai; a school in the idyllic setting near Alice Spring in Australia; tough inner-city schools in London where you had to deal with social disaffection, behavioral problems and lack of discipline; schools for children with learning and physical difficulties, Down's syndrome, autism etc; tertiary or post graduate courses in Arizona University in America or Brunel, Surrey and Middlesex Universities in the UK or arts & science colleges or design schools in India – in all these places I have noticed the immense positive impact movement arts sessions had on the lives of the students and their education. I have witnessed huge positive changes taking place in participants whether they were the inmates of a high security prison in Wandsworth (London) or primary teachers and students of several districts in Kerala as part of District Primary Education Programme (DPEP).

What is it that the movement arts can offer to an individual in the context of education? We experience the world through our sensory organs and make sense of it through our intellectual faculties. The movement arts play a vital role in sensitizing and fine tuning one's body and sensory organs resulting in the connection of mind, body and spirit. This complicated process of wiring the body and its diverse functions makes it an efficient and fine-tuned instrument. In our traditional educational practices, there was an emphasis on giving the student an insight into the life forces and structures that govern them as well as the workings of physical and metaphysical spaces through the practices of martial arts, dance and body care systems such as yoga. Music and visual arts also featured in this equation. You can see that some of the best schools in the world today attach a lot of importance to including arts education and physical activity in their educational practices.

If implemented properly in our education system, contemporary movement arts have the capacity to provide the student with a deeper understanding of all academic subjects and the capacity to contextualize and connect that information with their own identity and culture. Information without this context loses its meaning and relevance and can even be alienating. Besides the obvious benefits such as physical exercise, body awareness and co-ordination, the movement arts also enhance awareness about space and structure, ability to work with other art forms such as music, plastic arts and digital arts as well as interpersonal skills and self esteem. But above all, the one thing it nurtures most is creativity. In other words, the movement arts could be the single most important tool for nurturing the multiple intelligences of the child.

Socio-cultural context

As change is inevitable and an ongoing process, one could aspire to steer that change towards creating a better life for oneself and society by taking control of one's own destiny in whatever little way and wherever possible. The key to play any role in that process, one could argue, is to have an awareness of the forces that are in operation and an understanding of the structures of the systems that are already in place. The ability to perceive and connect with histories on one hand, and the openness to imagine the possibilities for the future on the other, will contextualize experiences and enrich our understanding of the world. This is crucial to realize the potential each one of us has as individuals and as a society.

A large section of Indians are kept away from fully participating in the system, let alone shaping it in any meaningful way. This is a shortsighted view considering that our destinies are interlinked and we share a lot of spaces – physical and otherwise – within the system. The unethical yet perversely convenient answer we chose as a society was to deny admission into several spheres of life for a large portion of our population or at least disable them by not providing basic living conditions, health care and education. This willful act by people wielding power and resources of making people invisible from several spheres of our life has to change if we have to progress as an effective democracy.

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Nurturing creativity

Nurturing creativity through arts education is of paramount importance in addressing this situation. Access to the arts helps to equip a child with the tools, devices and skills to engage with a given situation creatively and process his experiences, memories and imagination, and structure them into a new entity. Through this process he/she will get the skills to imagine and create things which were not there before. This habit of seeking information by asking questions opens up the doors to knowledge. Impositional teaching may or may not have some benefits but it clearly stunts the development of creativity in children. The teacher is one of the many sources of information and should act as a facilitator to encourage the child to seek information from multiple sources resulting in an exponential increase in creation of intellectual property.

Accessing and contemporizing information that is embedded in our traditions and its multiple strands is hugely important in building a relevant homegrown knowledge base and creating a self-assured society. For several rural, folk or tribal communities art practices are at the core of their identities and values. When we think of education for these communities often engaging with these art practices has to come even before literacy or numeracy. We need to go to the real sources rather than merely depending on the invented recent traditions, which have submerged a lot of sub cultures and taken out creative rough edges. This is only possible by enabling and empowering each citizen to process their histories, experiences and memories.

However, this should not make us insular and close our doors to information generated from other parts of the world or other cultures. We need to be confident in welcoming information and ideas if they help our development – no matter where they come from – and gravitate this to an evolving contemporary Indian aesthetics.

It will be a pity to limit ourselves to being content with our past glories and taking pride in showcasing physical culture such as our architectural monuments, and other material artefacts. Instead of engaging with our traditions in this fashion, we need to work towards generating new ideas and creations that are informed and influenced by these knowledge systems while not being limited by them. Therefore, prescriptive policies will be limiting. I would instead argue for a facilitating, empowering set of policies where each individual is given the opportunity to process his or her experiences, memories, imagination and thought for self realization, self alteration and self-expression. Creativity and authorship, whether it is individual or collective is enormously enhanced by such empowerment.

Ideas of aesthetics, beauty etc. is not static notions, but results of ever evolving complex relationships between multiple trajectories that are influenced by perceptions, vantage points and value systems. Like many artistic concepts, arts education also needs constant updating. The advancements in neuroscience, cognitive science and digital technology are playing an increasingly important role in the development of artistic practices today. These, along with trans- disciplinary works, are redefining the arts.

Identity

In today's globalized and inclusive world our identities are made of layers of overlapping spaces, inhabited by people of diverse ethnic, socio-economic, linguistic, cultural and other backgrounds as well as persuasions. When we disable sections of society we are indeed disempowering a part of our own identities. When information is increasingly becoming available, it is foolish to think we can perpetuate semi-feudal, unethical and apartheid-like practices of denying people their basic rights including access to education and the arts. The arts are not elitist, as many people make them out to be; they are the very backbone of world-views, lifestyles and livelihoods of many educationally marginalized communities.

Culture is the last frontier, which will ultimately determine the power relations in the emerging world order. Be it the choice of the products we buy, the life we lead, the location we choose to live in, the clothes we wear, the art works and performances we witness, our cultural and aesthetic preferences are going to play a role.

Sensitized individuals and communities are the key to defining that order and arts education is an essential part of that sensitization. Therefore, there is an urgent need to sensitize students, teachers, educational authorities as well as parents and other stake holders about the possibilities of arts education in helping to shape individuals as fully functional entities to play their roles in the community, civil society, nation and the globalized world.

*Jayachandran Palazhy is one of the contemporary Indian choreographers and is Artistic Director for Attakkalari Centre for Movement Arts, Bangalore.*

# MUSINGS

## X ≠ Y

*Prema Narasimhan*

*The system that imparts education itself is divided in many ways.*

Oh! I am not going to talk about algebra I rather not, with my faint memory of what little algebra I remember after 40+ years of learning or rather, memorizing.

This is a different equation. Probably, a life equation that each one of us is exposed to every day, as we talk about life, raise slogans, draw cartoons, laugh around etc. Yes, you got it. This is about you and me, man and woman; boy and girl. See, even a so called gender neutral person is habituated to write man and woman and boy and girl rather than woman and man etc. It should come as no surprise then that our whole society is wrongly sensitized to gender. Alright, I am not going to talk about 'gender' in general. But it may be worthwhile to share some of my experiences with 'gender' and the way it is taught and practiced in schools. The other day I visited a primary school in a remote corner of Andhra Pradesh. As I entered the 4th standard classroom, I found that girls and boys were seated separately. This is not a stray case. Most of us have seen this in many schools. When I enquired with the teacher as to why they were not seated together, the teacher said that the parents desired it that way. I went a step further and discussed the issue with a few parents including a senior leader in the village, and was told that they preferred the children to be seated separately (boys and girls) to 'avoid any wrong thing' in the class. Further, one mother told me that children are exposed to many things so much earlier in life through various media and may not be in a position to discriminate between what is "good" and what is "bad". So, why give a chance? Although, I really did not know if the mother was correct or not, I could vaguely decipher what she meant. I certainly feel that there *cannot* be any sort of discrimination in schools. The argument by the parent also made me think beyond. Can we ignore the emotions and opinions of the parents?

Another scene in a Karnataka school goes like this. I enter the 5th standard classroom. The boys were seated on the left side of the class and the girls on the right side. In addition there were some fifteen students seated in middle (both boys and girls). I did not realize I was committing a mistake when I asked the teacher why some students were seated separately. The answer came like a rapid and emphatic rush of words in Kannada stating plainly that "they cannot learn". Not only was I shocked, but it was even more disturbing to see the expression in the eyes of those children. Are we creating a new caste system in the schools, by branding children as 'slow learners' or non-learners?

As we work towards creating a equitable and just society, such seemingly un-harmful practices like seating the boys and girls separately within classrooms, can create significant damage. While one of the goals of education is to create an equitable society, our schools themselves are creating new forms of inequity. Of course, it is true that these inequities have existed in our society for ages. However, bringing these inequities of gender, caste and learning ability into schools does more harm than good.

It is also important to note that while we have been thinking and discussing about an equitable society through education, the system that imparts education itself is divided in many ways. In many states there are as many or even more teacher associations as the political parties. We have also heard of many instances of isolating a particular teacher within a school due to caste / religion / gender / qualification / subject they deal with etc. If we could not bring the equity within the education system, how do we expect the equity in class room?

There are simple things we can do within the classroom to reinforce our efforts in creating a equitable society. Allowing boys and girls to sit together is the first step. With the due support of the community, teachers, and the education department, this simple intervention can enable us to create a society where women are treated equally, and thus create a future where we can say confidently that X=Y.

*Prema Narasimhan is Head, Content Deployment, Azim Premji Foundation.*

# MUSINGS

## Do we want teachers to teach?

*Preeti Mathew*

*The teacher should be given an opportunity to concentrate on teaching activities only.*

Increasingly we see teachers being entrusted with a lot of responsibilities other than what would be ideally expected. During my varied interactions with various cadres of functionaries and teachers from government primary schools in Gujarat, Madhya Pradesh and Uttarakhand, there have been some questions that have dogged me persistently but as yet, remain unanswered. Do we really expect our teachers to teach?

Single teacher schools

There are single teacher schools with varying number of student, say, 20 60 students or even more. These schools are smaller schools located in the fields or away from the main village habitation. In such schools, the teacher is responsible for a number of tasks. It may be still comfortable for a single teacher to teach students but they are definitely inadequate for all other sundry tasks in school. What is to be noted is that the same teacher who teaches is also expected to attend meetings, keep the records, ensure that the mid-day meal happens regularly, and also make regular visits to the parents. It comes as no surprise that what we have finally after all these functions, is a tired and apathetic teacher.

The question I raise here is - how much do we expect of our teachers?

Recruitment of teachers

If the teacher is appointed to a school away from the location that he/she prefers, there is also a problem of adjustment and frustration. Hence the question arises that why is it that a teacher is not given a choice of their preferred location of work. A possible solution can be that the process of recruitment of teachers must be further decentralized to the block level. Those teachers who wish to apply in a particular block must apply to those only. There must be various positions to which they can apply: teachers - rural; teachers - urban, teacher - semi urban. There can be a better tally of the projected requirement of teachers. This tally would also ensure that it is balanced.

Mid-day meal scheme

Mid-day meal as of today has taken a lot of time and effort of the teacher during school hours. The teachers, who are enthusiastic enough, spend a substantial portion of the time in ensuring that the meals are given on time and in required quantity. Moreover, any need for the raw materials requires the teachers to buy them. This adds to the work of the teacher and takes away considerable time from the working hours. Obviously our expectations from a teacher are unreal, to say the least. But now that we are facing this situation, how do we deal with it? My suggestion is that the mid-day meal scheme must be taken out of the school premises and outsourced to local institutions. This would help save time to do better teaching. It will also add to space in the school premises as some part is occupied in mid-day meal material storage. This will also lessen the paper work done by schools.

Support system to the school

Today out of the 240 working days in a year, some of the days are taken up in the enrollment drive, some in the trainings, some in the examination, some in the celebration of weeks or days to be celebrated by the school etc. We must have a record of how many days are *actually* given for teaching-learning to take place

Involving teachers in household surveys, health surveys, population census and elections directly hints that at present we have no human resource parallel to the teacher who we feel would be capable of doing such tasks. Again, this also supports the point that we are trying to get task done by teachers also because it cuts down on the cost of employing such a big force. But after all, this is at the cost of the teacher's time in school. Hence do we want the teachers to teach?

As a measure to help the schools, each school must have a community worker as a support to the teacher. The worker must have required qualifications to do so. But this in no way will substitute visits to parents that a teacher is supposed to do in the village.

Thus, I strongly advocate that each government school have a community worker, a support staff for administrative purposes and a helper. The rationale behind this is that then the teacher would be in a position to concentrate completely on teaching and related activities. This will help take the time out of administrative tasks in the school. Even if studies suggest that there is not much of administrative work, I view above suggestions in the light of making environment at school conducive for the teacher to teach.

*Preeti Mathew is State Coordinator, Learning Guarantee Program - Gujarat, Azim Premji Foundation.*

# MUSINGS

## "Mari Shala"

*S.Gayathri*

*The importance of being Bindooben.*

"Mari Shala" in Gujarati or 'My School' in English. The real essence or philosophy behind the school is also the same. How commitment or passion of a single person can show light to so many is epitomized by Bindooben, a teacher at a school in Gujarat. Unassuming yet having a quiet aura about herself. She is brimming with enthusiasm and pragmatically states that it is not about completing seventh standard but seven years of education that clearly sets the difference.

What differentiates this school from any other government school was the passion and sense of belongingness that every individual associated with the school exhibited. The school was characterised by freedom, a basic trust that each one of them is capable to be part of a system and will be able to work for its betterment. There was no protocol or bounded discipline which characterises a majority of the schools. Here the attention was not merely on acquisition of cognitive abilities but to make them a better human being.

A peek into the school

A regular day in the school starts at 11am and goes on till 5 pm, but interestingly it is often seen that the school starts early and ends late. Most of the students from the village are present in the school even before the teachers are there. They come early and start off with their daily chores. There are some children who are sweeping the school, some watering the plants, others filling water in the tank and so on and so forth. In order to facilitate the smooth functioning of the school, the management has assigned each child a ministry. Some of the different ministries assigned to children are "paani mantri"- minister for water, "utsav mantri"- minister for different celebrations, "Khel mantri"-minister for sports etc. There are different chores which are enlisted like cleaning of rooms, filling up water, maintaining the gardens, toilets, playground etc. Every child is involved in different processes, on a rotation basis. The formation of different ministries and the election of different ministers are done in the most democratic fashion with the consensus of all the children of the school.

Take for instance the time when the need was felt for a water tank to be dug, within the school premises. Bindooben elaborates that the school children were made part of the entire process by involving them in all the processes- from digging of the water tank, money matters, deciding the location of the tank, the man power and man hours that would be required to complete the project to how it was to be done. The teacher explained that the entire project was devised, executed and monitored by the children.

Using work as a basic tool to impart education, is an important principle which the school practices. It seemingly similar to the Gandhian principle of basic education where craft centered education was given importance. Clearly, the pedagogical principles were not designed to complete the course but the emphasis was on competency acquisition by the child.

Here the child is kept at the centre of the teaching learning process. The dignity of the child was respected and the innate belief that learning of a child can only take place in an environment where there is no fear for the consequence, was given paramount importance. The emphasis was on creating a learning environment for the child which was an extension of the natural environment of the child.

Contextualising education formed the core of the entire exercise. What does this mean? The TLMs were created from the locally available materials. In the teaching learning process ,there has been an effort made to establish linkages between what the child knows from his immediate environment to the new learning which the child was about to acquire.

Bindooben- the teacher

This brings me back to the comment I had made earlier. What makes a person feel the need to make difference in others lives? There are various stages of transition when you see people who make difference merely by their presence…….rather than questioning the obvious they try to create the path for themselves and take people along with them. Bindooben was a teacher of a rare kind. Rather than

compromising with the system she has tried to pave a new way by taking charge of the situation.

What made her different from the 'others' was that she knew what she wanted from life –the purpose of her living and was ready to strive for it. She had the courage to dream and to strive for the dream. The house she stays and the life she leads may sound utopian to many. She has been brought up in an environment which is unadulterated by the hypocrisy of life and believes in the basic innateness of life. Her life is a story of human goodness, the basic trust that life is most fulfilling when you share it with somebody. She and her husband share a dream of making a difference in the lives of the children, to give them a purpose to live, to enable them and to empower them. This in turn they believe will bring in a ripple effect and can bring change in the community.

By practicing the lines of modelling theory of Bandura, she was setting an ideal example for the children. Rather than her extolling the virtues of life, she was trying to set an example for the children by leading a life which was worth emulating. Her simplicity, accessibility to children, playfulness, and most importantly, a basic trust in the innocence of the child could not be missed. She respected the individuality in each child and at no stage was trying to create clones among them or preach the do's and dont's. It is through the process of educating them that she was preparing them for life.

The vision of treating every one as equal has created a strong foundation for *Maari Prathamaic Shala*-the foundation of equity, equality and democracy. There is a greater identification for the need of education as a preparation of life rather than a tool towards literacy.

She felt in the process of education there is a greater need to establish an identity among the learner about who they are and the need to establish the linkage of where they are learning to its utility in their life. It is this establishment of linkages in education that will create a personal identity and a greater sense of belonging with the task in the hand.

A lot of what Bindooben spoke with me shall remain with me for long. She once quipped that educating the children was not to churn out engineers, doctors, professionals or scientists, if they become one in the process, there could be nothing better than that, but what was far more important was that they become *empowered individuals* who can lead a life of dignity.

*S. Gayathri is Member, Research and Documentation team, Azim Premji Foundation .*

# FOUNDATION UPDATE

## A. Education Management

1) Capacity building among education functionaries in Karnataka state:

   Foundation has been engaged in developing managerial capability of education functionaries for the past few months.

   The sixth and seventh batches completed their training in *Centre for Leadership and Human Resource Development* (CLHRD). With this, 260 Karnataka Education Department officers have received the training.

   The first and second batch of Master Resource Person's (MRP), who would build capacities within the department, completed their second phase of training at *Canara Bank School of Management Studies*.

2) Analytics: The objective of this programme is to streamline the information flow. Karnataka School Quality Assessment Organisation (KSQAO) data has been integrated with EMIS data at the district and block level for all the 32 educational districts. The data is available at district/block/cluster/school level and subject wise.

## B. Assessment Led Classroom Reforms

1) Evaluators' training was held in Uttarakhand and the second year of evaluation was completed in 460 schools of Uttarakhand. The transcription of data has since been completed.

2) Question papers were formulated in Uttarakhand.

3) Feedback of evaluation was shared with 1042 schools in Madhya Pradesh and 868 self assessed schools in Gujarat.

4) Recognition functions were held for the schools who participated in the evaluation, and where the children performed well.

5) District academic group to support schools towards Learning Guarantee Program was set up in Vidisha. This is on the same lines as the group which is already present in Datia.

6) In Gujarat, our team held a 3 day workshop to refine the assessment tools and question papers which are to be used for the Learning Guarantee Program evaluation that is scheduled for July 07.

7) In Rajasthan feedback to 250 schools in Sirohi District was given through a one day interaction at each of the 5 blocks.

8) Learning Guarantee Program newsletter was released in Karnataka, Madhya Pradesh and Uttarakhand.

9) Workbook Development for Rajasthan - The SPD has invited the Foundation and its partners - Digantar and Vidya Bhawan, to develop children's workbooks. This will be developed for core subjects of classes 1 to 8. A team from Azim Premji Foundation is stationed at Rajasthan to complete the first phase by mid May. The project will provide excellent opportunity to build capacity among Azim Premji Foundation academic members and is also likely to contribute to the teaching learning process for schools across Rajasthan.

## C. Technology for Education

1) Azim Premji Foundation assisted Sarva Shiksha Abhiyan in testing the new model of UPS that has been developed by bidders for the tender. This is part of the Government drive to effectively address the issue of power in Computer Aided Learning (CAL) schools.

2) Karnataka CAL team installed Computer Management and Monitoring Software (CMMS) in 16 schools, 8 schools from CAL first phase and 8 from Lucent schools, in around 88 computers.

## D. Content Development

1. <u>Content creation</u>:

   New Initiatives: A CD has been converted into bi-operating system compatibility, on a pilot basis. The CD is functioning in both Linux and Windows OS.

   Master CDs: The CD on Weather & Climate has been completed.

   Content in tribal language: Completed 2 CDs each in Santali, Soura and Kui

   On last count, the Foundation now has 112 Master CD titles in 18 languages.

# FOUNDATION UPDATE

## E. Education for the Underserved

1) This project attempts to develop curriculum for the children of migrant construction workers.

The first such school at Total Environment builder's construction site in Whitefield has been functional from Feb.07. There are almost sixty children who attend the school.

Focus group discussions were held with parents of the children to understand their expectations. A coordination group has been formed with the builder's representatives. The children have adjusted to the environs and have built a good rapport with the team. There also appears to be a strong sense of ownership of the school amongst the children. They maintain the school premises with complete dedication. School property is utilised with care and the children go to great lengths to ensure that the school property is not taken out of the school premises.

A nearby hospital has formally agreed to be our partners in providing healthcare to the children.

## F. Research and Documentation

1) Andhra Pradesh Randomized Evaluation Study: The end line assessment test has commenced in about 800 schools in 6 districts of Andhra Pradesh. A team of 480 evaluators were recruited and trained in 6 batches over 4 days each.

2) Other projects: The analysis of the achievement status of the 214 indicators of Child Friendly School initiative, Shorapur, after the third round has been completed. A consolidated report is ready. Cohort analysis of the children has also been carried out.

## G. Child Friendly School

1) Shorapur

a. Evaluation of digital learning material available with various agencies to see how teachers can use them in teaching-learning process, is underway.

2) Chittoor

a. Observation of pilot schools under the reading workshop in Kalikiri Mandal was carried out.

b. Support was provided to the CAL schools, and the CAL survey report for 50 CAL centers, was produced.

c. The program is formally closed. However CAL programme continues to be functional in 50 schools.

# RESEARCH UPDATE

- *Attendance analysis shows that gender disparity in Rajasthan schools is prominent; in Gujarat, Uttarakhand and Madhya Pradesh (MP) the difference in the attendance of boys and girls is less than 1 per cent.*
- *In caste-wise analysis a mixed picture emerges - the Scheduled Tribes (STs) have the lowest attendance in MP and Rajasthan, while in Uttarakhand and Gujarat it is the general category children who have the lowest attendance. The caste group with the best attendance is different in different states.*
- *Achievement analysis provides a clearer pattern across the four States - the number of boys attaining 60 per cent competency is more than girls, though in some cases the difference is marginal.*
- *Barring Uttarakhand, in the other three states the highest percentage of children attaining 60 per cent competency are from the general category; the next best performance is by the Other Backward Classes (OBC) children. However, the performance of the Scheduled Caste (SC) and ST children is of concern in all the states as they form the group with the lowest number of children attaining the 60 per cent competency level (with the exception of STs in Uttarakhand).*
- *The achievement analysis indicates that the overall performance across the four states is poor and the performance of the 'disadvantaged' children is poorer. In no state have even 50 per cent of the children have attained 60 per cent of their grade level competencies. The best performance is displayed by the ST children in Uttarakhand where 31 per cent of them show an attainment of 60 per cent of the competencies.*
- *Overall, boys perform better than girls and the general category children perform better than children from other castes.*

These are some of the Learning Guarantee Programme (LGP) findings in the four states. Based on the evaluation of the first year of LGP in Madhya Pradesh and Uttarakhand; and the Baseline evaluation in Rajasthan and Gujarat an analysis of attendance and achievement is presented in this update.

LGP was first experimented for three years in 7 districts of Karnataka between 2002 and 2005. The programme is currently being implemented in two districts each of Madhya Pradesh – Vidisha and Datia; Uttarakhand – Udham Singh Nagar and Uttarkashi; Rajasthan – Tonk and Sirohi; and Gujarat – Banaskantha and Sabarkantha.

The programme is currently in its second year in MP and Uttarakhand. The first year (2006) results from these two states were shared in November 2006 issue of *Learning Curve*. In Rajasthan and Gujarat, where the first round of LGP evaluation is yet to take place, a baseline evaluation has been done. In Rajasthan, all the schools that have volunteered to participate in LGP evaluation underwent a baseline; in Gujarat, a 10 per cent sample of the LGP participating schools were administered the baseline evaluation.

Assessment of the learning outcomes of children is an important aspect of LGP. The assessment processes or the tests in all the four states were similar. The learning outcomes assessed were based on the grade appropriate competencies in three subjects (State language, Math & EVS) and held across classes 1 to 4.

Though two districts each participated in the programme, the number of schools differed from state to state as shown here and the analysis is based on these figures:

| States | No. of schools involved | Total no. of children enrolled in participating schools |
|---|---|---|
| MP | 1541 | 127784 |
| Uttarakhand | 420 | 38023 |
| Rajasthan | 1057 | 73113 |
| Gujarat | 96 (10 per cent sample of the total) | 10661 |

ATTENDANCE

This section of the analysis looks at the attendance of the children in the LGP tests which were conducted on regular school days and during regular school hours.

*Table 1*

| Gender-wise attendance | | |
|---|---|---|
| | Girls | Boys |
| MP | 68.4 | 68.0 |
| Uttarakhand | 91.1 | 89.9 |
| Rajasthan | 63.8 | 71.2 |
| Gujarat | 90.5 | 91.6 |

In the gender-wise analysis of attendance figures there is a difference of less than a percentage point between the attendance of boys and girls in all the states except Rajasthan; in Rajasthan far fewer girls attend (64 per cent) compared to boys (71 per cent). The best attendance among both genders is in Gujarat and Uttarakhand where around 90 per cent of the enrolled children attended the test. Among the four States, MP had the lowest attendance for boys (68 per cent) and Rajasthan for girls (64 per cent). Refer table 1.

*Table 2*

| Caste-wise attendance | | | | |
|---|---|---|---|---|
| | Gen | SC | ST | OBC |
| MP | 68.1 | 70.5 | 54.8 | 68.7 |
| Uttarakhand | 89.1 | 91.9 | 94.9 | 89.4 |
| Rajasthan | 78.1 | 66.1 | 58.2 | 70.2 |
| Gujarat | 89.4 | 90.9 | 89.9 | 91.9 |

The caste-wise analysis shows that the difference in attendance between the castes is less in Uttarakhand and Gujarat than MP and Rajasthan. In Uttarakhand the difference between the caste group with the lowest attendance (general category) and the caste group with the highest attendance (ST) is 6 per cent and in Gujarat the difference is 3 per cent between the group with the lowest attendance (general category) and the group with the highest attendance (OBC children). In MP and Rajasthan the difference between the caste groups with the lowest and highest attendance is 15 to 20 percentage points; in these two States ST children have the lowest attendance (55 per cent in MP and 58 per cent in Rajasthan).

While the average attendance is above 60 per cent, MP has the worst average attendance and Uttarakhand has the best.

ACHIEVEMENT

The analysis here focuses on the performance of the caste and gender groups in the LGP tests in Hindi, Maths and EVS across classes 1 to 4. No school in any of the four states meets the LGP achievement criterion - 'at least 60 per cent of children in a school achieving 90 per cent of the competencies assessed'. The percentage of children attaining 90 per cent of the competencies is less than 1 per cent in most of the cases even when analyzed under separate caste and gender groups. Hence, for the analysis the level chosen is 60 per cent achievement; the analysis looks at the percentage of children attaining 60 per cent of the competencies in each of these groups.

*Table 3*

| Gender-wise achievement<br>*(% of children achieving 60 per cent of the competencies)* | | |
|---|---|---|
| | Girls | Boys |
| MP | 3.6 | 4.7 |
| Uttarakhand | 18.7 | 22 |
| Rajasthan | 10.8 | 15.4 |
| Gujarat | 5.4 | 5.8 |

It comes out clearly that boys out perform girls in these tests in all the four states, including Uttarakhand also where girls' enrollment is higher. The difference is the largest in Rajasthan (4 per cent). (Table 3)

Among the different caste-groups, the general category children fare the best in all the states, except Uttarakhand where the ST children's performance is the best (32 per cent). In MP and Uttarakhand the SC children perform the worst (3 per cent & 17 per cent respectively); and in Rajasthan and Gujarat it is the ST children who perform the worst (11 per cent and 2 per cent respectively). Refer Table 4.

*Table 4*

| Caste-wise achievement<br>*(% of children achieving 60 per cent of the competencies)* | | | | |
|---|---|---|---|---|
| | Gen | SC | ST | OBC |
| MP | 5.2 | 3.3 | 3.4 | 4.4 |
| Uttkhd | 19.7 | 16.8 | 31.6 | 25.1 |
| Rajsthn | 16.9 | 12.2 | 10.7 | 13.7 |
| Gujarat | 8.6 | 5.9 | 1.9 | 6.0 |

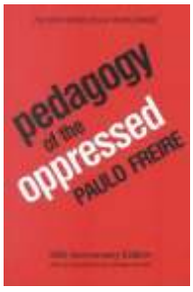
In MP, Rajasthan and Gujarat where the general category children perform the best, the OBC children's performance comes next. Interestingly, the ST children in Uttarakhand display the best performance among the caste groups across the four States; 32 per cent of them attain the 60 per cent achievement level. Further investigation is required to understand the reasons behind the comparatively positive performance of the ST children in Uttarakhand. However, the worst performance of the caste groups is also that of the STs; only 2 per cent of the ST children in Gujarat attain 60 per cent of the competencies. The performance is poor across all the caste groups in all the four states. '32 per cent of the children attaining 60 per cent' is the best performance among group-wise performances, the average performance being much lesser.

All the four states display a similar pattern in many respects. This indicates that certain aspects do not vary across the different geographical, socio-economic and political conditions. The limitation of the analysis is that the data is based on only two districts each and even within them the data analysed pertains to only those schools which voluntarily participated in LGP.

*This update has been prepared by the Research & Documentation team, Azim Premji Foundation.*

# BOOK CASE

## "Pedagogy of the Oppressed"- Paulo Freire




Anyone who reads in the fields of Justice, Liberation Theology, Education and related fields will before too long come across references to Freire's Pedagogy of the Oppressed. Essentially *Pedagogy of the Oppressed* is a book about education as a lived experience arising out of Freire's own life as a teacher of adults in poverty stricken scenarios. Freire delineates the incredible potency of education as a tool for liberation (genuine revolution of the people) and its capacity to dominate people. The argument of the book is how one can develop the former and the dangers of falling into the oppressive trap (the banking model of education). It is, in short, a blueprint for an education system that empowers those being taught which, in the dialogical model he proposes must include the educators themselves.

Perhaps his most generative idea is that education is always a political act. This idea was not a mere slogan for him. While progressing through the book one would notice that for Freire education always involves social relations and hence necessarily involves political choices. Freire insists that questions like 'what?', 'how?', 'to what end?', 'from whom?' are central to any educational activity. These are not meant to be abstractions. Every educator has to ask these questions, and answers to them would be crucial guides to any critical educational process. Therefore, he argues that it is impossible to remain neutral in education, and one has to realise that all educational polices and practices have social implications. They either perpetuate exclusion and injustice [in the contemporary context of the major debates in education on reservations, commercialisation/privatisation of education and many others] or they assist us in constructing the conditions for social transformation.

The most interesting aspect of the book is that according to Freire, the conception of education did not stop inside the classroom. While he understood the importance of classroom he went further to insist that radical pedagogy holds the key to eradicate the ailments in society. He develops further that education can help us to understand the world we live in and can make us better prepared to transform it, but only if we deeply connect it to larger sociopolitical realities in which we live and also to struggles to change it for the better. In response to it he proposed a new epistemological approach towards education, 'the radical pedagogy'.

In the book Freire explains that education can be the vehicle to transform the society. Development of 'critical consciousness' is essential to his educational scheme, for this is what will enable the masses to transform reality and subsequent action upon it. This liberating education, conscientisation, confronts existing traditional education which is based upon what Freire calls the *banking* model, a model that reflects an oppressive social structure: "In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those who are considered to know nothing. Projecting an absolute ignorance into others is a characteristic feature of the ideology of oppression which negates education and knowledge as processes of inquiry.

He talks about group conscientisation which will develop critical consciousness in each individual which serves as a basis for liberation from the shackles of cultural subjugation and oppressive dominance of the social and political structures. The development of critical consciousness, by which demystification of political structures and economic relations takes place, enables the communities and also individuals to assert their humanity and to confront dehumanisation systems.

The theoretical paradigms given by Friere seem to be the need of the hour especially in the Indian educational context. Even in the post independence era oppression is replaced by state sponsored subjugation.

In this regard the radical pedagogy lays down the road map to challenge the status quo and also strengthen the consciousness of the masses which would make sure that they will no longer be regarded as the empty vessels to be filled with information, rather they will be 'conscientised individuals' who would participate in the process of decision making and governance.

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