The Future Learning Environments

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In ancient times, learners went to seek learning at the feet of the masters (gurus) and lived with them, served them and imbibed their values system and approaches to knowledge. One was by and large free to choose one's guru, and the guru had the right to decide which pupil he would accept. There were gurus and philosophers who were on the right side of the rulers, and there were men of the stature of Diogenes who had scorn for them. No wonder Alexander is reputed to have said that he would have wanted to be Diogenes, if he were not Alexander.

It seems that till the pre-colonial times, India too had a system with gurus at the centre and the community to support them, and then the British rulers rightly diagnosed this as the strength of the society and promptly went about declaring such education illegal, and put in place a state sponsored, controlled and administered system, which we are following to this day. In one sentence most of the education being handed down by the State is pathetic, though there are a few islands of excellence.

Some three decades ago, satellite based education experiments demonstrated the possibility of country-wide classrooms. Along another dimension, these three decades saw rapid advances in computing technology, with faster processors, more compact memories, lower electrical power requirements to run these and a massification which has been unprecedented. The more recent convergences that have now occurred between information technologies and communication technologies have now redefined broadcasting, so that entirely new varieties of one to many and many to many communications are possible with two-way interactivities. Add to that the different manifestations of wirelessness such as the blue-tooth, the Wi-fi, the Wi-max, the GSM, and the CDMA and we have the clear possibility of reaching out to almost any latitude and longitude. You no longer have to be born at the right latitude, the right longitude and the right time to have access to high quality education, but it can be more or less independent of location.

So would the recent launch of the Educational Satellite fulfil the expectation of reaching out to our entire constituency in the Constitutional obligation of education for all? Well it could, but there are at least three more major components to make it really work. The first is the new pedagogy, if you will, of creating a teaching-learning experience which has the satellite based transmission of knowledge as a key component. The second is giving it legitimacy. As of now a learner who has learnt entirely by himself by watching any of the many educational channels and has acquired the capability of passing a Board or a University exam cannot do so, unless he is admitted to some Institution, all of whom have very restrictive access policies and encourage exclusivity rather than inclusiveness. The third and in many ways really central to the whole program is training of teachers to use this and adopt it. Today, a hypothetical teacher who is a 'digital Socrates' is actually not allowed to practice his profession by the NCTE, the AICTE, the UGC and all regulatory bodies. He is however not jailed as yet, or crucified like Christ or sentenced to death like Galileo and Aristotle, and we must be grateful for small mercies. We should however not despair. For often the solution to problems of the future lies in learning from the past and adapting to the new context. Let us get back to community response, putting the teacher centre-stage and not necessarily waiting for the Government to make the first move.

I would like to take this opportunity to share with our readers, a very recent experiment in putting the highest end technologies available in the most impoverished settings of a roof-less, class-room less teaching initiative, where children are getting free education entirely through voluntary effort. Under the aegis of a fledgeling initiative named the Learning Foundation India, three volunteers two of them Lillas, who have studied Psychology and Journalism in the USA, and Herschel, an external student of the University of London, created an experience, which I will call the HLL experience. What HLL did was to place a laptop computer with a big screen in place of the blackboard, have about six students interact with it using a wireless keyboard, and within a short time the children (aged between six to ten years) were so engaged that over the next two hours they were constructing relatively long sentences, writing difficult words and continuously thinking of new things they could do. On the way they heard music, took photographs using a digital camera, saw their pictures, communicating in a mix of English and gestures. While in some ways reminiscent of the 'hole in the wall' experiment of the NIIT, this was clearly different in that it was 'inclusive' with the children actually touching and playing with the latest equipment and guided, mentored, patted, complimented and occasionally even hugged by their teachers as a reward for having shown evidence of learning. The increase in esteem and confidence were enormous.

In my view, the HLL experiment is a historical moment in Indian education, as it struggles to find how it can morph from the colonial past, an extremely unsatisfactory present to a bright future that we somehow intuitively feel should be ours. It is as significant as Piaget's observations on young children's learning or the experiments on electro-magnetic induction by Faraday when he could get the galvanometer to show a flicker of current when a magnet was moved near a wire. From that experiment to creating grids of electrical power generator was an evolutionary journey. We would probably see in the future grids of teachers working seamlessly with networks of computers and world-wide learning pads in the learner's hands that will replace the slate and pencil of yester-years. ■