

ACTIVE LEARNING, PASSIVE TEACHING

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This was a national level workshop with school teachers. They were asked, “Which year of your life did you learn the most?” This was a personal question and not a test of their aptitude or knowledge base. After a little pause one lady said, “In class 9th I had a wonderful science teacher. She actually took us to the science lab and showed us experiments – how to make oxygen. She even let us play around in the laboratory. This is how I got interested in science. I guess I was 15 years old then.”

Another teacher said, “Earlier I was very diffident and timid. While doing B.Ed. I had a fine teacher who encouraged me to speak and inspired me to read good books on education. Books like “Divasvapna” and “Tottochan” opened up a totally new world for me. For the first time I understood the deep passion and the compassion of an inspiring teacher. I learnt the most in my 22nd year.”

Both teachers had given clear, lucid answers. Their answers came straight from the heart. But both missed the question by a long shot – which year of their lives had they learnt the most? The answer was clearly the first year of their lives. As teachers and parents we often forget that the first few years of a child’s life are the most important years. When we were just born we soaked in all the sights, smells, sounds which came to us. We probed, touched, licked and kicked everything within reach. Children are totally new to this strange big world and want to make sense of it with all the intensity that they can muster.

We learn the most in our first year. As we grow old, our learning slows. While body cells die and are replaced, we get our entire reservoir of brain cells “neurons” at birth. Neurons only deplete, they are never replaced. Luckily we get a large stock of them at birth.

Before children can understand a thing they need experience: seeing, hearing, touching, tasting, smelling, choosing, arranging, putting things together and taking them apart. Children need to experiment with real things. Children need lots of concrete experiences with a variety of materials – cutting, sticking, manipulating, assembling etc. This rich experiential base will later provide fertile ground to nurture abstract and abstruse concepts. The cardinal principles of education enunciate – from the near to the far, from the concrete to the abstract.

Little children love crumbling and tearing old newspaper. The paper has a warp and a weft. While tearing they discover that they are able to tear long, almost parallel strips in one orientation and only short strips in the other direction. Why this? Perhaps there is a design to it. The grains of paper are so arranged that there is more strength in one direction as compared to the other. This is the “internal discipline” of the material and not an external diktat imposed by the teacher. Children imbibe these nuances without any words.

The beauty of an “activity” based classroom is that the teacher is spared the task of evaluation. If the “flying fish” or a paper “helicopter” is not made well it will simply not fly, giving instant feedback (with no adult help) that there is some goof-up. The child will then roll-up her sleeves and will keep modifying until her model flies.

It is adult arrogance to say that we “teach” children. All children are born learners. They learn a great deal by themselves, often by intently watching and imitating the adults around them. All children learn to speak and communicate – one of most difficult skills to learn without being “taught”. Children have enormous powers of concentration.

Maria Montessori demonstrated this over a hundred years ago. She was Italy’s first woman doctor. After getting her Medical degree Montessori worked with the children of slum dwellers. Montessori is famous the world over for her deep pedagogical insights. She designed scores of teaching aids – several of them are still in active use – for instance the Post Box. This is a hollow wooden cubical box. On each surface of the box is a cut-out of a particular geometric shape – a circle, triangle, square etc. There are corresponding wooden blocks which have to be “posted-in” the respective slots. A wooden ball for instance would go into a circular hole, and a prism would fit into the triangular slot.

There was an elderly priest who was very interested in Montessori’s work. On Sunday’s he would drop by to see Montessori’s experiments. One day Montessori took him to a corner of the class, where a little girl was playing with the post-box. She was deeply absorbed in her work. Montessori asked the other children to make a circle around the girl and sing a song to disturb her concentration. But the little girl was so absorbed in her work – in trying to figure out which block goes into which slot, that she did not even look up. After some time Montessori lifted the little girl physically and seated her on a big table. As soon as the girl got her berth she once again got absorbed in trying to figure out which block will go into a particular slot. She was totally lost in her own world.

The priest – a good old Samaritan, often used to bring toffees and chocolates for the kids. On that day he had got a big box of biscuits. He started distributing biscuits to the children. He also gave the little girl a biscuit. The little girl reluctantly took the biscuit. She intently looked at it. She saw that the biscuit was rectangular in shape. So, she posted the biscuit in the rectangular slot of the post-box.

Montessori demonstrated a hundred years ago that children do not learn through bribes. They learn because they are new to the world and want to understand how it works. Mark sheets, certificates, medals, stars and prizes are bad substitutes for the real joy of knowing the world.

In India the pre-school years are perhaps the most neglected part of a child’s education. Most of the nursery schools have little understanding about childhood. Little children who should be playing with sand and water are made to learn the alphabets and colors by rote.