

# Professor MM Pant

Founder LMP Education Trust



## Professor MM Pant discusses changes in teaching practice and developing an improved capacity to learn among today's school children.

Professor Pant is an independent expert specialising in pedagogy, technology and the development of tools and curricula for 21<sup>st</sup> century education. He holds a Ph.D in Computational Physics, along with a Professional Law Degree, and is a well-known and highly respected practitioner in the fields of Law, IT enabled education and IT implementation. His past roles include the Former Pro-Vice Chancellor, Indira Gandhi National Open University (IGNOU) and being on the faculty of IIT – Kanpur (the premier Engineering institution in India), MLNR Engineering College and Faculty as well as Visiting Professor, University of Western Ontario-Canada.

### Developing the characteristics of a successful education system

Professor Pant launches straight into his vision of a successful education system with characteristic clarity: "A successful education system is one which produces successful people."

However, he warns against impatience when judging success, explaining that "the benefits of education manifest over a very long time, making it difficult to judge the effectiveness of a system".

His current thinking is based around building a system that improves education for all, reflecting one of the major challenges facing India as it attempts to deal with the scale of educating hundreds of millions of people. As he puts it, "Instead of focusing on the high achievements of a few, we need to concentrate on improving the educational ability of the whole. We need a new education system which improves the cognitive ability of a massive numbers of people by a certain amount. This would have a much larger social impact as improving people's learning even at small levels improves earning potential."

### Developing 'learning metrics'

Professor Pant has begun the job of creating a theoretical basis for these much needed changes which he calls 'learning metrics'. He draws attention to the fact that only two measures are adapted to learning. One is the quantum of input, typically in terms of teacher student contact and the learner's own efforts, which together go into the assignment of some 'credits' to a course. These may vary from 10 hours to 30 hours for one credit, and the equivalent of a full time course ends up with about 1000 hours of annual student effort. The other is the measure of student performance in a summative assessment, which

is either in terms of marks or grades. The performance is summarised by an average mark or grade. Thus, the total effect of one year of academic interaction of about 1000 hours is represented as a single number or letter of the alphabet, but learning happens every day, every hour, and in fact, every minute. Therefore new things need to be measured such as the learning rates. Professor Pant believes the purpose of educational intervention should be to improve learning rates. Professor Pant references a Japanese system called *Kemba Kaizen* which “stresses continuous improvement by small amounts, which we can adapt for the new learning design”.

When discussing what he perceives as the main value of such an approach, Prof. Pant explains that the key is to equip individuals with learning techniques: “If someone can learn the same skills over a shorter period of time, this is a competitive advantage for society. This is done by improving learning capability.”

### **India’s knowledge economy and the impact on education**

We move on to discuss the constantly changing dynamics of the Indian economy and the impact this is having on education. For Professor Pant, understanding the significance of the shift away from manufacturing towards a more developed knowledge economy is key: “If you don’t understand the needs of the knowledge economy, you are not on the right educational path. Educational departments need to concentrate on this.” He is also adamant that India needs to democratise education and empower people to both learn and teach. As he puts it: “Anybody who wants to learn should be able to do so and anybody who wants to teach should be able to teach.”

### **Bringing learning into the work environment**

Having outlined the characteristics of a successful education system, Professor Pant turns to the practical issues of incorporating a better understanding of industry and the 21<sup>st</sup> century work environment into learning.

He is dismissive of academic study for its own sake for all students. “National school leaving age is the age at which people should start getting ready to be able to work (including working in academia or high-end areas of research for pushing the frontiers of knowledge). Prolonged bachelors and masters are a waste of time for most” and readily offers an alternative in the form of a powerful analogy: “By the end of secondary education students should understand ways of learning and have had an initial exposure to an array of subjects and learning (information processing) techniques. They should be able to face the world. Anything else they need to learn should be learnt by exposure to life. Once you have learnt the basic skills of driving you learn by figuring your way around, actually driving.”

### **The ideal education experience**

When challenging Professor Pant on what an ideal learning environment would look like, he immediately outlines a clear vision that emphasises the need to re-imagine the role of the classroom teacher: “Higher education should be in situ, learning in a classroom can be very sanitised and removed from the real world. Education should relate to life, guide, with teachers mentoring students. Education should be

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He then expands on the role of teachers within this new environment, describing how teachers could be better prepared to deliver more engaging, learner centred classes: “Teachers should be able to empower a person and transform them into someone who wants to learn. Teacher training needs a rethink. We have never adequately studied the ‘teaching learning’ process and whatever research is done remains buried in theses, research journals and conference proceedings. It is seldom translated into practise.” I ask Professor Pant what is holding back change in teacher training in India, and how this situation could be overcome. He describes the problem as systemic: “The efficiencies of the education system have become critical; we need 15 teaching systems not one, to agreed learning outcomes and standards. If a million students waste one hour a day on a system, that is 1 million hours and a lot of rupees. There is a whole continuum between early and adult learning. You can’t teach twenty year olds the same way you would teach a young child.”

Professor Pant then goes on to explain the need to help students create individual learning plans and build on the Innovation and Creativity Learning Index produced in the UK, and expresses a desire to “create a pilot programme to build some impetus here in India”. He explains the basis for this vision: “Current thinking as developed by Howard Gardiner and others acknowledges multiple intelligences and as we celebrate diversity, we must start with the assumption that every child is brilliant. Education should therefore be about enhancing the natural brilliance of every child. That is what I am working towards.”

### **The skills, knowledge and behaviours needed to become a well-rounded person**

Professor Pant sees changes in the way education is delivered as part of a wider need to create more well-rounded students. He is concerned with the narrowing impact of existing educational models on children, and the risk of shutting down their innate curiosity: “The problem with our current educational system is that there is so much emphasis on passing exams and getting grades that kids don’t stop to think if they are actually living.”

Professor Pant explains that he has already begun developing an approach to affect what he argues is a much needed change; an approach that has high ambitions: “The International Baccalaureate Programme has a very interesting subject called the ‘Theory of Knowledge’ which discusses what makes up a human society and touches on epistemology, without so calling it. I have formulated a short awareness course called ‘The Overwhelming Questions’, which looks at ways of dealing with life’s concerns, for example, why does this world exist? What is our relationship with the world? These questions cannot be answered but we at least become aware of them.” This course complements a set of four other short courses on ‘How to Learn Anything’, ‘Learning to Think’, ‘Yearning to Learn’ and ‘Communicating with Humans and Machines’. The package is collectively named ‘Learning 221’ to denote essential learning for the second decade of the 21<sup>st</sup> Century.

Finally, Professor Pant articulates a concern around what he perceives as a real lack of tolerance and empathy in Indian society which he is convinced must – and can only be – addressed by the Indian education system: “Understanding the issues around global concerns is very

important. Issues such as respecting and tolerating diversity and sustainable development...understanding that winning an argument is done through reasoning not violence. India is today a very violent nation for one which founded Buddhism 3000 years ago and which has Gandhi as its Father of the Nation. How do you learn to live with the things you are forced to live with?"