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Education Matters @ ETMA

Vol. 1, No. 4, February 2014

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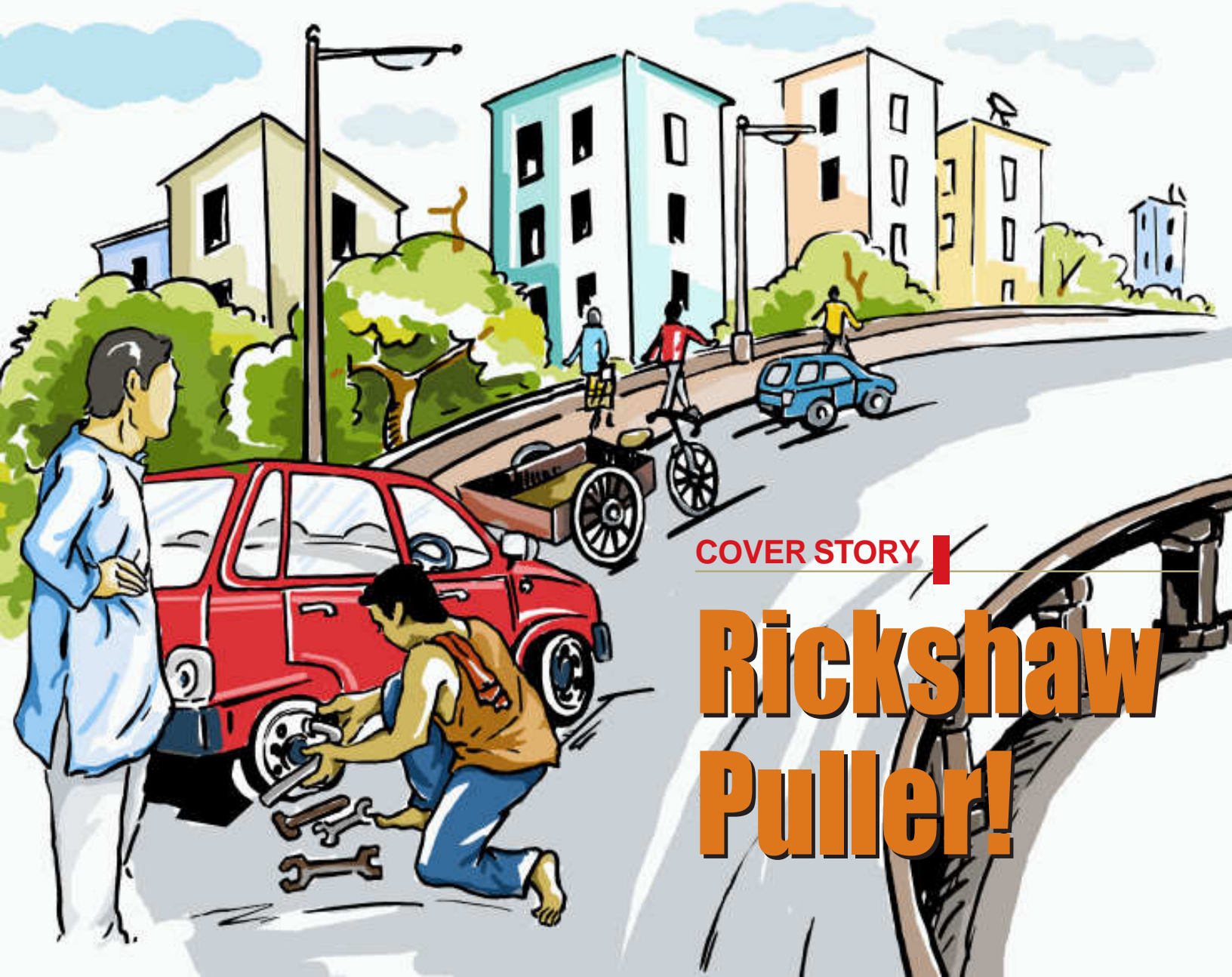


as Knowledge Partners

In Conversation with
Dr. Sadhana Parashar P- 12

**RTE- Craftsmanship over
Draftsmanship P-25**

**Innovation in
Value Education p-36**



COVER STORY |

Rickshaw Puller!

CONTENTS

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Cover Story

Rickshaw Puller!

- Marmar Mukhopadhyay

P-4



Women's Entry, Survival, and Advancement in Engineering and Technology

- Jaya Indiresan

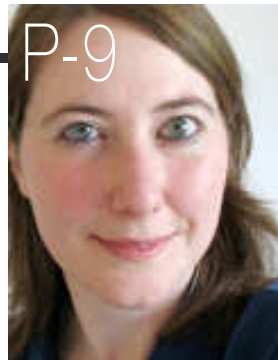
P-8

Talk to Teachers

From Research to Practice:
High-Quality and Effective Professional Development

- April J. Niemela

P-9



Institution Building P-15

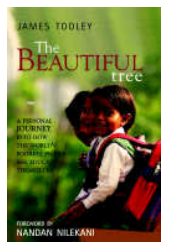
SCHOOLASAN INSTRUMENT OF SOCIAL CHANGE: UDANG HIGH SCHOOL

- Aakanksha Tomar



Book Talk P-17

The Beautiful Tree: A Personal Journey into How the World's Poorest are Educating Themselves



Tips for Parents

Nurturing Child's Potential: Bridging the Gap between Home and School P-20

- Dr. Subhash Chander

IN THIS ISSUE

Interview **P-12**

In Conversation with **Dr. Sadhana Parashar**



Educational Opportunities

Educational Opportunities in Human Resource Management



HEALTH

Physiology of Brain Functions **P-29**

Dr. Rajesh Acharya

Knowing Our Rights **P-25**

RTE -

Craftsmanship over Draftsmanship



1. **Cover Story** 04
Rickshaw Puller!
- Prof. Marmar Mukhopadhyay
2. **Editorial** 06
University: World Class or World Ranking?
- Prof. Marmar Mukhopadhyay
*Women's Entry, Survival, and Advancement
in Engineering and Technology*
- Prof. Jaya Indiresan
3. **Talk to Teachers** 09
*From Research to Practice: High-Quality
and Effective Professional Development*
- April J. Niemela
4. **Interview** 12
In Conversation with Dr. Sadhana Parashar
- Aakanksha Tomar
5. **Institution Building** 15
*School as an Instrument of Social Change:
Udang High School*
- Retold by Aakanksha Tomar
6. **Book Talk** 17
*The Beautiful Tree: A Personal Journey into
How the World's Poorest are Educating
Themselves - By James Tooley*
- Arunima Naithani
7. **Tips for Parents** 20
*Nurturing Child's Potential: Bridging the
Gap between Home and School*
- Dr. Subhash Chander
8. **Educational Opportunities** 23
*Educational Opportunities in Human
Resource Management*
- Aakanksha Tomar
9. **Students Speak** 24
What is Education?
- Rohini Singh
10. **Knowing Our Rights** 25
RTE- Craftsmanship over Draftsmanship
- Divita Yadav
11. **Student Well Being** 27
Emotionally Illiterate- 21st Century Learners
- Arunima Naithani
12. **Health** 29
Physiology of Brain Functions
- Dr. Rajesh Acharya
13. **Classroom Innovations** 34
Innovation in Value Education
- Bhumika Kapoor
14. **Teachers Speak** 36
My Happy Experiences as a Teacher
- Padma Prabha Rao
15. **Career Opportunities** 37
*A Career in the Indian Army: a Soldier's
Perspective*
- RV Singh
16. **Parents Speak** 39
Education without Values- Who Is To Blame?
- P.G. Kamath
17. **ETMA News** 42

Rickshaw Puller!



‘Sir, you are an aged person, that too unwell. You are stuck on the road. Is it not my duty to help a person like you? Don’t you also help others? Would you accept remuneration if you were in my place? If I take money, it becomes my business – I’d then be selling my skill. I feel happy to help; and not sell.’

I was driving back from Saraswati Vihar in West Delhi to my residence in the NCERT campus in South Delhi – a stretch of about 30 kilometers. It was a hot summer noon. The Sun God was at His generous best, showering all the heat and light right at the top of my head reminding me of Van Gogh. I was driving the smallest car available then – Maruti 800. Right at the top of the Mayapuri flyover – about half way of the journey – my car started wobbling. Steering did not help me much. I realized that one of the tyres must be flat. I tried and parked the car on the side of the flyover. I knew I was taking a risk; the tyre would have a cut. I got down from the car and noticed that the left rear wheel is in a tight lip lock with the tar on the road.

I know how to change a car wheel. I had done it several times earlier to my monstrous Ambassador Mark II. But, then I was not

an experienced victim of Rheumatoid Arthritis. Now I could barely manage driving the car. I had tried earlier, and I knew I can’t bend down to fix the jack; or even turn it to raise the vehicle, nor can I turn the nuts of the wheel. I realized that I had to seek help. Stuck right at the top of the flyover, with quite a distance on both sides to walk down and seek help; combined with being a damn slow walker myself, again due to my good friend Arthritis; I gave up the idea of walking down to get help and decided to stop some car or a motorbike and seek help – just the physical strength.

For more than half an hour, I stood in the hot sun trying to stop one vehicle. During those more than 1800 seconds, some 900 cars and motorbikes sped past me. I signaled to every passing vehicle, seeking help. But not a single ‘good man’ stopped even to ask – ‘what’s the problem?’ Having given up all hopes of human help, I opened the



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boot, took out the jack and the spanner, and tried to loosen the nuts in the wheel with the spanner. Nothing much happened. They clung to the wheel in deep love. With a lot of gymnastics I tried to place the jack where it should be. I could not bend, so I did not know whether the jack was at the right place or not. After considerable efforts, I was able to insert the rod into the jack to turn. I tried, but it just wouldn't move. I was feeling miserable; literally helpless on the middle of the road.

That was the time; I saw a rickshaw trolley crawling up the flyover. The *rickshaw-walla* could not pedal up the stiff climb. He was manually pulling his cycle trolley. Body sculpted in metal by the likes of Michael Angelo, he was in a sleeveless banyan and torn trousers; if he was a college student, his trousers would have qualified for 'fired jeans'. But not him. He was completely drenched in sweat trickling down his forehead; he was breathing fast enough to be audible from a distance. How I wish, I could help him.

I immediately remembered that it was I who needed help. I swung between hope and despair. A man so troubled in his own life, how could I ask him to help me? Would it not be selfish on my part! What if he says 'no'? What if he does not know how to change? The answer to the last question was easy. I knew how to change. I only needed to borrow his physical strength. That's it.

He stopped and parked his trolley just ahead of my car, probably to breathe. He was at the top of the flyover; now he will go downhill; time to break and breathe.

Desperate, I approached him.

'I know you are totally exhausted. Can I seek a help, please?'

He looked at me and asked, 'any problem with the car?'

'Yes, I have got a flat tyre. I am an arthritic patient. I can't manage it myself. Can I seek your help, please? I have been stranded here for more than half an hour.'

He inserted an iron rod in between the brake of the front wheel of his trolley so that his

rickshaw may not roll down. Then he started walking with me towards the car.

What a relief! There was someone to help.

Knowing that he is a rickshaw puller, I decided to take his help wherever physical strength was required. Before I could instruct him how to change a tyre, he looked into the boot, took out the spanner, and loosened the nuts on the wheel. Then he turned towards the jack, placed it properly and started turning it to raise the car. In the next few minutes, he took out the spare wheel from the boot, fitted it, placed back the punctured wheel in its place, packed the jack and the spanner, and closed the boot. 'Sir, it is done. You can drive. But get the puncture repaired at the earliest.' I nodded with all the gratitude in my command.

I was surprised at his efficiency. It seemed as if he had read my mind. He said, 'Sir, I used to drive cars earlier and have also worked in a car garage. I left all that and now I pull my own trolley.'

My gratitude knew no bounds – a God sent helping hand at such an odd place and an odd hour. I put my hand on his broad sweat-wet shoulder and thanked him to express my sincere gratefulness.

I knew what a mechanic or a tyre shop in Delhi would charge for this service. I wanted to compensate and also reward for his helpfulness. I must admit, I also had some kind of sympathy for the hard labour he puts in his work to make a living. I took out some money from my wallet. As I tried to push it into his hands, he tied his hands at his back, 'No sir, I can't take money for this small work.'

'I have been stuck here for the last half an hour or probably more. I sought help from everybody but not a single car or motorbike rider stopped. You are the first and only one who came to my help. You may not be able to imagine how grateful I am.'

'No sir, I can't take the money.'

'You know that anyone in a car garage would charge me. You have earlier done such work.

Why can't you take some money? I'll feel good if you please accept this.'

'Sorry Sir, I earn from ferrying goods on my trolley. I have not carried any of your goods. So I can't take it.'

What an argument! 'Please' was the only word I could speak.

He said, 'Sir, you are an aged person, that too unwell. You are stuck on the road. Is it not my duty to help a person like you? Don't you also help others? Would you accept remuneration if you were in my place? If I take money, it becomes my business – I'd then be selling my skill. I feel happy to help; and not sell.'

The professor-ego in me was humbled. The rickshaw puller's wisdom ... my God!

He took my leave, and happily rode away down the fly over.

I stood there to see him rolling down with ease. Honestly, I could not think of overtaking him on the road, because he had overwhelmed and overtaken me. I started my car and started rolling down slowly behind him only when he had gone quite ahead, simply out of sheer respect for his wisdom. I wanted him to lead me.

Once he took a left turn and disappeared, I changed my gear.

Epilogue

15 years later, my eyes opened up with a lot of questions. For instance, why did he pull the trolley on the flyover instead of taking the road below the flyover? How did he get such a flawless chiselled body that I have only seen in stone sculptures? Why did he stop his trolley when the next half of his journey was a relaxed ride down the flyover? How did he learn such great values when he apparently hardly makes two ends meet? And many more. No rational explanation works. I feel sad that I could not recognize Him when he came and helped me through the difficult situation.

[Back](#)



Marmar Mukhopadhyay

University: World Class or World Ranking?

The President of India, Sri Pranab Mukherjee has lamented in several of his lectures in the university community that not a single Indian university figures in the top 100 or 200 universities in the world. The Government of India has decided to set up 14 world class universities in the country; it has identified the cities and three modalities, namely (a) New Innovation Universities with focus on distinct issues of national importance, (b) Upgrade selected existing universities, and (c) Create Educational Hubs. Should India create world class universities or figure in the top 100 or 200?

Research indicates that there is no definite meaning or single acceptable definition of what a 'World Class University' is. It's rather a fad. As Philip Altbach says, "*unknown or less known* (emphasis added) universities from central Canada to Persian Gulf call themselves world class universities." A large number of Indian universities, especially the private universities display their vision 'to become a world class university'. World Class University is at best a fuzzy dream or ambition. The nearest meaning is they want to offer quality education to students; producing quality research that is publishable in internationally indexed journals. Let us say, all ranked universities are world class, but the reverse is not true. India should, if at all, concentrate on world ranking which is something more concrete.

On the basis of certain criteria and weightages, THES, SJTU, and QS rank universities that cooperate with the survey by providing relevant data. In the absence of any definite meaning of the phrase 'world class university' one can guess this to be a member of the Top 100 or 200 universities. A question that needs pondering: 'should the World Ranking Universities be called world class universities?' If yes, till what rank – 100, 200, 500 or 1000 or more?

Ranking is like performing in examination. A large number of very good students do not perform well because they do not know the techniques of performing in examination; they do not have any strategic plan to excel in examination. Similarly, if Indian universities have to rank, they must develop strategic plans to score against the blue print of the evaluation.

SJTU ranking is exclusively based on quality of research. As much as 30% marks are on Nobel prizes and Field Medals in Mathematics by staff (20%) and Alumni (10%); another 20% each on publication in Nature and Science, and highly cited researches in life sciences, medicine, physical sciences, engineering, and social sciences. Remaining 10% is the weighted score of the five indicators and full time staff equivalent. THES criteria are Teaching (30%), research (30%), citations (research impact) (32.5%), international mix (5%), industry income (2.5%). There are actually 13 criteria that have been grouped into six. QS

Indian universities need to examine whether they are equipped; if not, create and place in position a strategic plan to get the scores. SJTU criteria are too heavily weighted towards high quality research; THES and QS criteria are relatively inclusive offering some opportunities for Indian universities to scale the ranks.



evaluates universities on six criteria, namely, Academic reputation (40%), Employer reputation (10%), Student-to-faculty ratio (20%), Citations per faculty (20%), International faculty ratio (5%), and international student ratio (5%). As a matter of history though, the original ranking exercise began in 2004 as a joint venture of THES-QS; later they separated. The top 100 universities in the world, in THES ranking score 94.9 to 52.6 (2013-14 ranking).

Indian universities need to examine whether they are equipped; if not, create and place in position a strategic plan to get the scores. SJTU criteria are too heavily weighted towards high quality research; THES and QS criteria are relatively inclusive offering some opportunities for Indian universities to scale the ranks.

There are some interesting and useful studies that provide inputs for creating strategic plans. These are: (a) Excellence in Research – top quality research professionals (professors); (b) Academic freedom for the professors; (c) Internal self governance of the universities; (d) Adequate facilities for academic work; (e) Adequate funding; (f) Intelligent leadership. There is a large amount of research evidence to prove ‘Intelligent leadership’ as the most crucial factor as he/she moves all the other five factors. Also, a study on the top 100 university leadership indicated that each one of them is a distinguished academic scholar (reputed research professor).

The government’s declared policy of setting up 14 ‘world class universities’ with the three approaches needs reexamination. This resembles adding more management that calls for better management. Learning from the studies now available on world ranking universities, the government needs to open up its policies allowing the appointment of international faculty; redefine

student-faculty ratio to match the world ranking universities; allow academic freedom and support faculty initiatives in research and teaching innovations; reduce interference in internal self governance of universities (remember how even IITs and IIMs are interfered by government officials); and debureaucratise, depoliticise and decaderise appointments of vice chancellors and other leadership positions to select distinguished academicians to lead universities. India has been drawing international students from the developing countries; what we need is a qualitative shift creating India as a destination for educational tourism. Finally, to achieve ranking, government must enhance to a substantially different level and ensure eliminating the sluice gates that create gaps between budgetary allocations and actual release of funds to universities. The government must consider providing research grants/subsidy to private universities.

There are very strong counter viewpoints that question the wisdom for India joining the rat race of world ranking because India cannot afford it. World class (read as ranking) universities refer to global standards which may not be able to respond to national and regional realities, cost-benefits issue, etc. There are also arguments in favour of departments/disciplines instead of universities. For example, Caltex that ranked first in 2013-14 is ranked so because of its excellence in technology. From this stand, IITs and NIITs stand better chance to figure in the ranking if they substantially improve research with impact factor.

Ranking or no ranking, this debate is important as it points towards academic quality that is missing in majority of the Indian universities that can be described to have islands of quality in the ocean of mediocrity.

[Back](#)



Jaya Indiresan

There is a common belief that with a large number of women entering various professions, discrimination against women does not exist anymore. Numerous anti-discrimination laws have been passed; several gender positive policies and practices have been formulated. However, there are anecdotal reports and some studies available to indicate that women do experience a “chilly climate” in their work places.

Women’s Entry, Survival, and Advancement in Engineering and Technology

In the previous issue we discussed the main factors holding back women from reaching leadership positions, especially in science and technology. In the very first step of entering the profession they face several barriers. After having crossed the first hurdle and entered the profession they need to survive before they can advance. On a personal level, working long hours, late at night, being alone in the lab with several men colleagues, safety of travelling, and several such factors make women’s survival challenging. On the social side, marriage, children, spouse’s transfers, etc. interfere with the career of a woman. Further, there are discriminations, stereotypes, and subordination of women in the workplace. This requires an understanding of the professional climate in which one has to function. There is a common belief that with a large number of women entering various professions, discrimination against women does not exist anymore. Numerous anti-discrimination laws have been passed; several gender positive policies and practices have been formulated. However, there are anecdotal reports and some studies available to indicate that women do experience a “chilly climate” in their work places.

In general, it is believed that women colleagues are treated fairly but quite often, and inadvertently, women are treated in such ways that convey a subtle yet powerful message that somehow they are not as capable as their male colleagues. Several witticisms attempt to bring these understated, often hard to detect, biases to conscious awareness. In one such not-so-subtle example, a manager “appreciates” a female colleague’s idea by wondering out loud whether he could get one of his male colleagues to propose the same thing. Often such behaviors could be very trivial or minor annoyances, but when they happen repeatedly, they can have a major cumulative impact. This interferes with the development of women’s confidence, professional participation, and career goals. It undermines self esteem and damages professional morale. It leaves women professionally and socially isolated, restricting their opportunities for professional contribution.

The small number of women in many of the professions makes them very visible and at times invisible. Some time back, I saw a British Council Documentary where there was a scene in which a male enters a computer lab, where a sole woman professional was working. He looks around and says, “Oh! There is nobody here!” Such behavior, both professional and social, stands out, subjecting women to greater scrutiny. Their presence or absence is noticed. Thus the professional climate in which they are expected to function has an important bearing on the comfort level experienced by women for their survival.

Having entered the profession and managed to survive, how to climb the ladder is the next challenge.

[Back](#)

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By April J. Niemela

High-Quality and Effective Professional Development Getting Started

As educators, we seek a rich and equitable education for all students, one that prepares them for life's opportunities, post-secondary education, and a variety of careers. To accomplish these goals, teachers need opportunities to develop skills and understandings that meet the needs of today's rapidly changing world. For example, in 2006 the changing definition of what it means to be a "planet" meant that Pluto no longer qualified and the solar system had eight planets instead of nine. Teachers had to understand the new criteria and explain this to their students. In another example, popular beliefs regarding the differences between left- and right-brain personalities have since been disproven. Teachers who had used this theory of learning within their classrooms had to

From Research to Practice: High-Quality and Effective Professional Development

Series Editors

*Punya Mishra & Matthew J. Koehler
Michigan State University*

Introduction by Punya & Matt

It gives us great pleasure to introduce the fourth article for a regular series of columns that introduces readers to contemporary educational research and its implications for practice. This column addresses the important topic of *professional development for teachers*. This column was written by April J. Niemela, a doctoral student at the College of Education, Michigan State University, working under our supervision.

reconsider the ways they taught students. This rapid development of new learning means that teachers cannot afford to be complacent with the knowledge and understanding that they start their teaching careers with. Instead, they must embrace a commitment to lifelong learning and development of their craft. But how do we change teacher practice? How do we know whether the time and resources we dedicate to professional development are well-used? And, most importantly, how do we know that teacher learning impacts student learning?

What Does the Research Say?

Professional development has long been recognized as a way for teachers to learn new developments in their subject areas, discover new teaching strategies, and

collaborate with other educators. There are many forms of professional development, some of which include conferences, workshops, lectures, summer institutes, and online professional learning communities. Professional development can be sponsored by governments, educational organizations, local schools, or even by teachers themselves, as they seek out learning opportunities. However, some professional development is better than others, in both form and content. In fact, some professional development never impacts student learning. Because one of the core purposes of teacher professional development is to impact student learning, it is important to know which kinds of professional development are more effectual. Research shows that there are five key characteristics of high-quality, effective professional development.

Research over the past decade has consistently shown that providing professional development with the following five characteristics not only produces strong teacher knowledge but also impacts student learning in significant ways:

- **Focus on subject-matter:** Professional development sessions have clear subject-area objectives and focus on specific knowledge in that subject-area (e.g., understanding photosynthesis in biology or examining cause-and-effect within the context of a historical event). They also model the best teaching strategies for that subject-area and provide clear instructions for integrating the same into classroom.
- **Engage active learning:** Professional development sessions include opportunities for teachers to interact with the subject-matter and with one another. This kind of learning can take many forms, such as having teachers practice learning, collaboratively assess their students' homework, lead portions of the professional development, observe expert teaching, and have another teacher observe them and provide feedback. The most important aspect is that teachers are actively participating and creating their knowledge; they are not passive observers.

- **Be consistent with teachers' situations and needs:** Professional development sessions need to align to current needs or understandings in the teachers' lives, as well as align to school standards and assessments. If the professional development is not seen as necessary, it will not be adopted by teachers.
- **Invite similar participation:** Professional development sessions should invite teacher participation from similar grade levels, subject areas, and/or schools. Learning together provides needed support and collaboration opportunities.
- **Provide sufficient time:** Professional development sessions should (1) be long enough for deep thinking, collaborative discussions, and active learning to take place; (2) extend over time in terms of weeks or months, giving teachers the opportunity to practice new strategies in their classrooms before coming back to learn new strategies; (3) happen on a regular basis so that teachers are reinforced and do not forget the new subject-matter or strategy.

How Can Professional Development Providers Best Meet Teacher Needs?

Considering the research, how can administrators and staff development

providers best meet the needs of their teachers *and* impact student learning? Instead of bringing in the outside expert or conducting a "one-and-done" workshop, professional development providers should provide a strategically organized and consistent program. There are three essential keys to unlocking dynamic learning for teachers.

Be Specific and Active

Clearly link the workshop objectives to a subject area and plan active learning around these objectives. Provide teachers with information that deepens their knowledge in the subject area and then provide an opportunity to practice applying that knowledge. For example, if the professional development program is focused on a subject area such as biology, deepen teachers' own understanding of the subject (e.g., photosynthesis) through an interactive classroom practice that best engages students (e.g., an age-appropriate photosynthesis experiment). This practice provides two important insights for teachers. First, it allows teachers to experience the instruction actively, making the subject matter easier to remember. Secondly, as they see the instruction modeled by workshop facilitators, they can visualize how to conduct the lesson in their own classroom. Research has shown that deep understanding of this intersection between subject area knowledge and best instructional practices matching is

especially important for quality teaching. Providing opportunities for active learning within the professional development session models the types of discussions and behaviors desired in the classroom setting and allows teachers the chance to practice them first as learners.

Because changing one's teaching habits is difficult and requires both effort and self-discipline, workshop facilitators must identify the top three-five key teacher practices or student outcomes



desired and focus their efforts on these. Teachers may want to change their teaching habits but have too many possible options to choose from, which makes change even more difficult. To help alleviate stress and encourage success, provide teachers with limited and specific targets (e.g. each lesson should include close-reading and annotating of a difficult passage of text). This will lead to less stress and increased success in the classroom.

Invite Similar Participation

Bring together teachers who share a common grade level, school, or subject area. When professional development is tailored to a specific group of teachers, it is more targeted and more impactful. Research also shows that when teachers participate with their peers from the same grade, school, or subject area, their learning is reinforced in job-specific ways. Because they work together, they have more opportunity to support one another with the new subject-matter or new teaching strategies. They can discuss how students responded to the lesson or problem-solve how to teach a difficult concept. In situations where teachers share the same students, they can even discuss which strategy might help a given student. Teachers who learn together also support one another, both professionally and emotionally.

Grooming teacher leadership is another benefit of similar participation. Changing teaching habits can be challenging, and it is helpful to see another teacher who is successful. Identify examples of teachers who are implementing the new strategies and invite them to share their experiences. This not only honors the expertise of your participating teachers, but it provides concrete examples of how to teach with the new strategy or subject-matter.

Commit Long-Term

Provide teachers with consistent professional development workshops that span six months or more. Longer professional development sessions provide time for deep and active learning, as well as focused discussions around students or teaching strategies. Learning is social, and the more opportunities that teachers have to share their experiences with one another and learn from one another, the more likely change will occur in the classroom. Conducting sessions over time, such as six months or longer, allows for teachers to go back to their classrooms, try out strategies, and then come back together to share,



problem-solve, and celebrate change. Research indicates that a long-term commitment to a professional development program is essential for impacting teachers' classroom behaviors and their students' learning.

Conclusion

Providing high-quality and effective professional development for teachers has rich rewards for both teachers and their students. When schools invest in their teachers, the potential for powerful teacher change and significant impacts on student performance is limitless. Such professional development requires a long-term commitment to active learning strategies, subject-area-focused sessions, and similar participation from teachers. The pay-off, however, is significant.

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Back

In Conversation with Dr. Sadhana Parashar



Aakanksha Tomar

CBSE has primarily been known as an examining body, but in the last couple of years there have been tremendous changes and innovations. What was the inspiration behind these changes?

I don't know if we can really call them innovations because they have been a part of our policy on education for a very long time. So it was more a question of effective implementation, and so the Ministry of Human Resource Development (MHRD), the Minister at that point of time, Shri Kapil Sibbal, and the CBSE came up with a 100 point agenda and much of it was something that had already been said in the National Policy on Education and the Program for Action (1992) and also in the Kothari Commission. Most of the commissions and policies had already spoken of the holistic development of students and of focus on scholastic and co-scholastic areas, continuous and comprehensive evaluation, child-centred education, inclusion, etc.; much of these things just came to be implemented more effectively in the last couple of years. As far as the CBSE is concerned, there was a focus on co-scholastic areas and we had started giving certificates for co-scholastic participation and achievement from 2000 onwards. We had said that schools must give a certificate of co-scholastic areas along with the marking scheme which the Board gives. However, even though

a lot of the schools did give these certificates, it still was not taken very seriously since it was not a part of the main assessment and was not reflected in the report card. So after 2009 when these changes were implemented, we ensured that the co-scholastic areas got more attention and focus by being reflected on the report card, which is something that remains with every child for a lifetime, and so it was taken very seriously. Other than that, the grading system was introduced and Board exams became optional, which were again some of the recommendation which had been there in the National Curriculum Framework (NCF), both NCF, 2000 and NCF, 2005.

What are some of the innovations in affiliation criteria?

It is not easy for any Board to do affiliation which is transparent, but since the time that the current Chairman of CBSE, Mr. Vineet Joshi, was the Secretary of the CBSE, the entire process has been made on-line, which means that when a school gets affiliated for the first time, there is an application which they have to put on-line. Once they have done that, they look up their status on-line and then an IP is constituted. So in this way the process has become more transparent. As far as the visit to the schools is concerned, now the performa which is used for affiliation at the first level has a lot of focus on classroom observation which has also been placed in the performa. So the quality of implementation of Continuous and Comprehensive Evaluation is also being looked at more closely by the team which goes to visit a school for the first time. This is the basic process and then we follow it up with a quality assurance process which is accreditation.

What are the new courses and things that have been introduced in the curriculum?

There are many new electives that have been introduced on the academic side. Of course the entire vocational scheme has also been given a new perspective. It is a very novel scheme which is in line with the National Vocational Educational Qualification Framework where there is a lot of focus on skill development. Also there is a lot of focus on tie-ups with the industry so that the entire process becomes more practical in the sense that the students become employable in the future after they are done with grade 12. As far as academics are concerned there are many new subjects or electives. We have introduced Theatre Studies; we've introduced National Cadet Corps as an elective. Then there is Legal Studies for students who want to take up law right after they graduate from High School, so that even at the senior secondary level they can get a little bit of knowledge which will prepare them for the career for which they have already made up their minds, just like those who want to become engineers or doctors have the option of taking up science. Then we have also introduced an elective based on the indigenous knowledge systems of India; it is called the Indian Knowledge Systems. We have introduced heritage craft which was done a few years back, entrepreneurship, and biotechnology. These are relatively new courses; of course the CBSE introducing so many courses has also created a need in the higher education sector, at the University level to maintain continuity in education for the time when students move from school to the university. Some of the universities like Mumbai University have started introducing courses to match up to this growing need. They introduced Financial Market Management when we introduced it in school. So they have opened up, but otherwise universities are rather slow to change, so we have been taking it up with the UGC (University Grants Commission), with different Vice Chancellors; we have sent nearly 800 letters to all the universities about the new subjects.

What are the changes in the academic process, from teaching-learning to assessment and examination?

Again, I won't say that it is new or innovative; it is just that now there is more focus on what is happening in the classroom which was never there earlier. For instance, if we talk about the evidence of assessment, which is a process which has been initiated to look at how formative assessment is being done in the classroom, now every second school is supposed to submit their evidence of assessment for each academic term. These are then examined by a group of teachers who are called 'Subject Experts' or 'Evaluators' or 'Facilitators'. Then there is also a process of decentralization which is happening so that everything is not done only at the regional offices where the staff is more administrative than academic but it is also done in certain schools which are known as nodal centres, the Principal is the coordinator. So a group of teachers who have been trained and oriented get together at the school and look at the evidence. These evidence are examined against a tool which

has been designed, developed, and now revised and perfected in the last 2 to 3 years (of course further revisions of the tool are possible); and finally the evidence is analysed. So at the end of the year or at the end of every term we do get a kind of picture regarding which are the schools, and in which particular areas, that are not being able to implement the changes effectively and then letters are sent to those schools, the teachers are called for training, the heads of the schools are called for interaction. In this way the focus becomes more specific.

Regarding the capacity building of teachers and heads of institutions, how is this task undertaken?

Now we have numerous agencies that are involved with us because the numbers of those requiring training are very large, especially those of teachers. So we have more than 40 agencies empanelled with us. As far as the quality of the agencies is concerned, we now have the Center for Assessment Evaluation and Research (CAER) who will be accrediting the agencies. So there is a focus on quality assurance in play there. We are also looking at being able to provide our own training which we will continue to do in a training calendar and we hope this year to have a training website so that the registration for all the agencies is done through the CBSE in an online mode, thereby maintain a more serious quality check and standardization.

What about school quality management and assurance?

The school quality accreditation is mandatory now since January 1, 2014. We finished two pilots and we now have an accreditation website. We have developed a brochure, a kind of FAQs list, and we hope that these will be useful to create peer assessors who will be heads of schools. They are a very important component of the entire process. So we are hoping that the mentors whom we have oriented in the last few years will become peer assessors and act as one of the corners of the peer assessor team, the other two being from the agencies, so that they contribute and become an integral part of the process of accreditation.

What are the innovations in global networking and standardization?

Through the Center for Assessment Evaluation and Research we have some of the best researchers and best minds in assessment. We have now started taking out small bulletins through the Center. We are also doing a lot of data analysis, the analysis of the performance of the students to look at whether it is professional exams, entrance exams or competitive exams, we can look at their performance in terms of item analysis and these item responses give us an idea of the kind of questions that we are making. Because a lot of the work of developing items also goes on through the academic unit, so it is a sort of a feedback mechanism for the paper-setters and item-writers. And I think data analysis really helps a great deal in terms of improvement.

How are all these innovations conceptualized by the CBSE?

I think that over the years we have grown into a strong team which, under the leadership of the Chairman CBSE, is thinking and focusing on implementation, on effective implementation, is using feedback drawn from multiple sources and then helping to further improve the implementation. So with a strong team, though not a very large team, and with the expertise available through ETMA, through CAER, we hope that we will be able to improve.

The reach of the CBSE is so vast, how do you ensure effective implementation?

That is why we are looking at multiple agencies as we need the support of experts in the field, such as Prof. Marmar Mukhopadhyay for instance, so that we can move forward with much more confidence that the schools are becoming quality conscious, that they are looking at the effective and appropriate implementation of not just CCE but all the other policies that are announced, so that there is a learner-centred curriculum and the larger curriculum of the school is also implemented with the focus being on quality at all times.

What kinds of problems and resistance to change do you face while implementing these changes?

Whenever any reform is spoken about, there is always resistance; the resistance to change is primarily at the heart of the matter. It comes in various forms: teachers resist, heads of schools resist, managements resist, parents resist, and I think students are more open to change than anybody else. If it is something which is



current and contextual then students look forward to it and they adapt to it much more easily. But over a period of the last few years, we've seen that resistance also comes in when there is lack of awareness and there is no orientation, and training has not reached the remote areas; once that is done, resistance changes

into acceptance. Also, I think that there is a huge concern about the kinds of options that are available to students and that is where the parents' perspective comes in. We tried in a small way to create Parent Advocates, but we need a lot more parent participation in this process with the understanding that there is a likelihood that life-skills and 21st-Century-skills are going to be much more important in any future work or employment opportunity than, say, academic excellence. Once that is understood then all the rest of it will also fall into place.

Do you plan a management audit or a program evaluation of your innovation efforts by an external agency?

Yes, of course. And we have been doing that, even before we initiated these reforms, we had requested the MDI (Management Development Institute), Gurgaon to develop a questionnaire for us which was followed by focused group discussions and then we did our own internal analysis which happens every six months. But we have also involved third parties such as EdCIL (Educational Consultants India Limited) who have done a review for us. We have also got an online questionnaire; it has been on for the last few years and has been analyzed internally as well as by Amrita University. So there is a consistent effort to get third party evaluation done almost every year.

[Back](#)

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School as an Instrument of Social Change: Udang High School



Aakanksha Tomar

This is a story of how a rural school was designed to act as a hub for rural transformation through leadership development among students, alternative pedagogy to suit the learning of rural children, involvement of the community for infrastructure development, and encouragement of students and teachers in disaster management in rural areas.

The year was 1933 and the community leaders had decided to set up a high school in Udang. Since there were no qualified persons around, Sri Nrisinha Parasad Mukhopadhyay was invited from another village to head the school. In the years to come, under the new headmaster's leadership, the school was to become much more than a place for transacting curriculum. It was to become the instrument through which the entire community will be energized and transformed.

Late Sri Nrisinha Parasad Mukhopadhyay grew up in utter poverty and deprivation. A self-learner for his collegiate education, Mukhopadhyay passed his BA with distinction from Calcutta University.

However, despite being an outstanding student throughout his education, rather than accepting a comfortable assignment in Calcutta he chose to teach in a rural school. His logic was, "If highly qualified rural students migrate to Calcutta, who will teach the rural children?" He joined Udang High School; one of the villagers offered him a mud hut as his residence, a house where he lived his entire life.

Udang and the surrounding villages comprised a poor community consisting largely of landless labourers or poor marginal farmers. The new school was the only high school in the cluster of villages around Udang, a school without basic amenities like classrooms, laboratories, staff room, library, toilets; just one big hall partitioned into four classrooms. There was no provision for schooling of girls in the entire area. A large majority of students were first-generation learners in their families without any possibility of academic support at home.

Missions

Although the headmaster articulated his missions on many occasions, they were much more visible from his actions. The

primary goal of the school was to become an instrument of change and transformation of the local community where, rather incidentally, some meaningful learning of subjects also happened. The second important mission was to develop and/or adapt the pedagogical processes to the given socio-economic framework, so that children might be able to sustain through the process of schooling under dire poverty on the one hand, and lack of academic support at home on the other. Furthermore, the school was to aim at developing life skills, concern for others and the community, and leadership qualities in students while also developing in the teachers, empathy for the children and the rural community. In building these missions for the school and the community at large, the headmaster not only involved the teachers, but also the community leaders. His most powerful ally was the local, only qualified medical practitioner from Udang, who later grew as a political leader. Several teachers had to be brought from outside the village. But as the school started functioning and students started passing out, old teachers either retired or returned to their own native villages and in their stead many of the past students joined the school as teachers.

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Actions and Strategies

Shri Mukhopadhyay's actions were primarily guided by his convictions. There were a number of important but uncommon activities practiced in the school that contributed to the achievement of the missions. For instance, it was a regular practice to give the responsibility of school events such *Saraswati Puja* celebration to the senior students. The students planned all activities; they prepared the budget and the entire cost of the celebrations was borne by contributions from the students and the teachers; they decorated the whole school building and installed the idol, fixed the priest, bought fruits, sweets, etc. They sent invitations to all parents and other members of the community and organized cultural programs which normally consisted of recitation, elocution, and theatre. The feast was a simple community lunch cooked in the school for all the 300-350 students. Students bought vegetables and cereals; they cooked, served, and cleaned up the premises. The school celebrated many other functions like Independence Day, Republic Day, etc., though on a comparatively lower scale. Such student-managed activities provided them with training in some of the important life skills like planning, budgeting and accounting, management of men and material, managing small and large events. It also built affiliation to the school where they perceived ownership because of the participative process.

Another incident was of great importance. The school received a government grant for the construction of school building. The headmaster consulted the teachers, local leaders, and some of his old students and the discussion led to the identification of the costs of different items like materials, labour, transportation, etc. It was collectively decided that the grant money would be used to purchase building materials such as iron rods, cement, etc., while community's contribution was to be mobilized for bricks and sand. Old students offered their services for transportation of material and labour. The doctor who was a competent mason offered to be the second mason; and the headmaster became the

labour manager and leader. The result was that while the total grant was just enough to construct one all-weather room, what actually resulted out of the grant was a two-storey building with six all-weather classrooms. Experiences such as these provided a conducive environment for the development of life skills and leadership in the students.

There was a unique way of engaging in academic discourses at Udang High School. Every year when the birthdays of the great sons and daughters of the country like Gandhi, Rabindranath Tagore, Subhash Chandra Bose, and Vivekananda were celebrated, the events came with a serious academic dimension. The teachers, community leaders, the doctor, and the headmaster made a well-orchestrated symposium by presenting the lives and contributions of these great men and women.

The villages did not have any provision for management of flood and fire, epidemics, and other such disasters. Because of poverty, exceptions apart, all village homes were mud-huts, with thatched roofs. Fire during summer days, hence, was not uncommon. But it was the floods that necessitated much greater management skills. The school building was the only building which could sustain the fury of the flood. Students evacuated the people and housed them in the school building and served them with food and water. This is how the students got practically trained at disaster management.

Student leadership was utilized for academic management of the institution. When a strike was called by the All Bengal Teachers Association (ABTA) this school refrained from joining the strike since it affected the students. After ABTA leaders spoke with the headmaster, he settled a contract with the leaders that the teachers will join the strike, only if the school would not be forced to be closed. The leaders were baffled by such a possibility but the students quietly organized themselves and created teams of twos. They created eleven such teams which were equal to the number of the teachers in the school; they prepared the absentee timetable and moved into the

classes and took over the roles of the teachers.

At a time when nobody had heard of concepts of innovative learning and teaching practices, the Headmaster initiated innovative pedagogical processes, particularly in teaching of English to the rural children. He used to teach one single prose piece, rather drama, in nine long months. He used this particular piece to teach linguistics in an applied manner, rather than teaching it as drama or literature. Since drama comprises dialogues, it was useful to develop functional skills among the rural children. Another innovation was multiple use of the same books and notebooks. As the majority of the school children came from poor homes, the Headmaster, with the help of the teachers, decided to make multiple use of exercise copies and books. Students were to write on the exercise copies first in pencil and then with ink pen over the pencil writing. Thus, the same paper could be used twice. Similarly, a textbook could sustain five years of reading; it passed from one hand to another and served five batches of students. Thus, at the cost of one textbook, five students could complete their studies.

Such bold, free, and engaging management practices suggest that the Headmaster's style of management was much more personal than organisational. He practiced the inspirational style in leading the school which transcended the local community as well. He inspired others by opening up his own life as a book to be read by all. In other words, he basically set the pace, without insisting on others to follow him. His role models and inspiration were, he said "... a combination of Gandhi, Tagore, and Tolstoy." When asked why he needed a synthesis of three such great personalities, he explained that all of them, despite their greatness, were human beings. Hence, they are achievable. However, "...when you generate an idea which is a synthesis of the three, it is not achievable, but a goal or ambition worth pursuing. What is important is the honest pursuit of the goal, rather than reaching the same."

[Back](#)



Arunima Naithani

The Beautiful Tree:

The Beautiful Tree is one of the must-read-books on education which gives its readers a route to a successful yet unnoticed education system from the stakeholders' perspective. This book brings in some inspiring success stories of school educators, teachers, and parents who've created their own private schools in response to failed public education in the poorest communities of India, China, and Africa. The seamless plots of this book make the reader delve deeper into the divide of development theory vs. indifferent practices adopted in these poor communities.

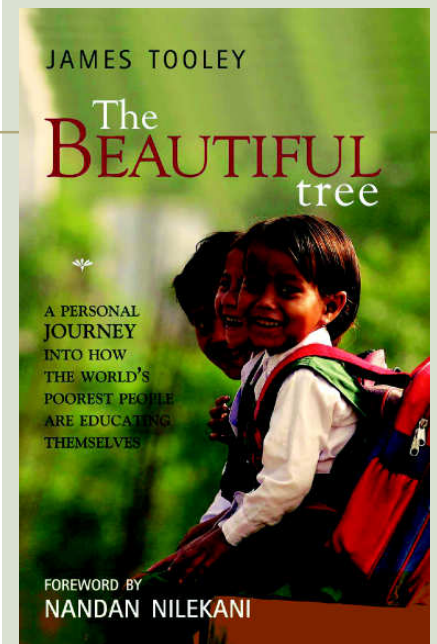
This book describes the poor parents' struggle and survival in providing rich educational experience to their children against great odds by defining a new meaning to *value of money* in education. A poor father quite realistically stated a comment on his decision of choosing private schooling over free public schooling. He said - '*If you go to a market and are offered free fruits and vegetables, they will be rotten. If you want fresh fruits and vegetables you have to pay for them*'. He has explicitly summed the concern of such parents who have made these informed educational choices for their children and are taking up the ownership in bringing schooling within their children's reach.

The book is an account of Prof. Tooley's

personal journey and research experiences in India, Nigeria, Ghana, and Kenya where he tested almost 24,000 children in math and language proficiency and he found that in almost all respects, children in private schools performed better than those in Government schools. His experience in various poor communities has revealed some intriguing evidences contrary to those as stated by development experts that private schools provide low-quality education. Despite the fact that these schools have unqualified teachers and dreadful school infrastructure, they still compensate as they are accountable to the parents. After reading this book, I could very much relate Prof. Tooley's journey with my own fellowship experience of working with low-cost private schools in remote rural communities of Darjeeling. Thus, it is quite evident that this is the case with all the developing countries as parents and educators are concerned about having an alternate option to free public/government education.

Prof. Tooley embarks into the new world of private schooling in developing countries which is educating more children from poor families than free government schools. These schools are not only serving the poor children by charging low fees, but also funding education for a few deserving cases. Their existence in developing

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A Personal Journey into How the World's Poorest are Educating Themselves

- By James Tooley

countries also unravels the realities of government/public schools with some hidden cost (for uniform, books, transport, etc). His quest of understanding this system of private schools for the poor also discloses the power of poor parents in making informed choices for their children in sending them to these unrecognized school because of direct accountability and performance. Prof. Tooley supports these ideas with his own survey, research, interviews, and findings with school owners, government officials, teachers, and parents in these developing countries.

The book is a delightful read and provides a potential solution for countries to achieve 100% universal education for all by 2015. Through this book one can understand that parents today can afford to send every out-of-the-school child to low-cost private school and need not depend only on free public schools for quality school education.

Back

Power to dream, discover and deliver



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School

Learning beyond boundaries

Learning of science, technology and maths becomes interesting and engaging when supplemented with robotics and modelling. Global Indian International School (GIIS) adopts a holistic learning approach towards classroom studies and, therefore, the lessons are interactive and thought provoking. Technical education has been introduced in all the campuses of GIIS India in the form of modules that are mapped to the syllabus.

The introduction of technical education through practical activities, animations, workshops, videos and documentaries help students to learn various concepts and skills using their own hands. Conducting such technical

activities at the school level develops thinking ability and intelligence levels in the students. It also inculcates the spirit of team building through working in groups. Such ground level activities help in forming a mental framework for students who wish to pursue engineering and medicine in the future. Robotics, catapulting, aero-modelling, contraption building, task machines, model making, tool handling etc are some of the activities that have had positive impact on learning.

Learning becomes enjoyable when there is excitement and fun. Robotics class at GIIS provides self-directed, challenge-based learning rather than simply absorbing and regurgitating facts. Each

group becomes responsible for executing the project in hand giving rise to healthy competition between groups. There are no winners or losers in the activity. All groups have the opportunity to improve their designs and knowledge.

The power to innovate comes from hands-on-learning when the students apply theoretical knowledge to practical solutions. The effective outcome of a lesson should generate curiosity in the young minds.



Children have imagination and creativity development provides them with wings!



Evolution of the flying machine from the hot air balloons to the modern day aeroplanes is a story that fascinates every young mind and before you know it the students are busy collecting facts and reaching out for their 'do-it-yourself' kit.

Aero-modelling and glider flying is a hit with the students of Global Indian International School, India. Every student was handed over a take-away kit and they assembled their very own machine upon the instructions of the trainer. This helped them concentrate better and apply their logical mind to the sequencing of each part. The students studied parts of the aircraft, understood their functions and importance of the design and finally the forces acting on them. The next level of the project was to make their planes work. The students

learned to balance the gliders and planes by attaching nose-weight in the form of bolts. The final joy was in flying their own aircrafts. This activity helped them to apply this knowledge and creativity on everyday objects. They can now design their own flying machines.

The curriculum is tailored in such a way that there is an interdisciplinary approach which involves teaching a number of subjects using a theme or topic as a central core, in this case 'flying machine' captured history, physics, maths, logical reasoning and the art of storytelling.

Robotics and model making as a part of the curriculum lends itself to the applied, real-life problems found in project-based tasks. It is a holistic way of learning that reflects a real world scenario.



Robotics instructor at GIIS explaining the parts of the plane



My plane is ready for flight



We can soar up to the sky



At GIIS we have learnt to make and fly our own flying machine



Dr. Subhash Chander

Nurturing Child's Potential: Bridging the Gap between Home and School

Mamta and Arpit wanted to talk to their daughter's class teacher to discuss about her feedback report they received from the school. They always thought that their daughter is doing well in class as she was much ahead of the activities kept for the previous month while doing them at home. However, when the feedback came they realized that her teacher is not aware about the present status and progress of their daughter. Today, they have got the opportunity to interact with the nursery class teacher during the parent-teacher meeting.

Mamta annoyingly asked the teacher, "I don't understand, she is doing so well in front of me and from your feedback it appears that she does not even know how to speak."

The class teacher responded, "We have taken proper feedback after conducting oral tests with all the students. She has not shown any improvement."

Arpit reiterated, "She is beyond all the tasks given in school. In fact she can write her name without a prompt. She can pronounce all the letters without mistake while reading words from books and newspapers. And she does it on her own,

without any pressure from our side.

"The class teacher was a bit surprised. She replied, "I will try to address his learning needs in school."

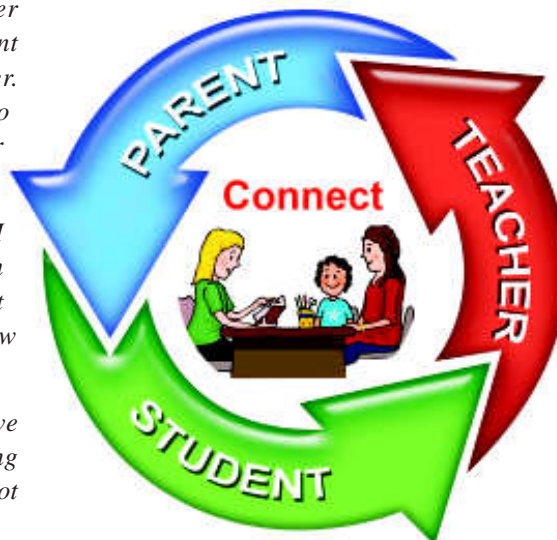
The above case reflects the many challenges that await teachers and parents during formal schooling. There are cases where a teacher recognizes such talent among the child that the parents are not

generalized approach to address individual needs of the learners in class. But the most critical is the lack of interaction among parent and teacher.

As a parent it is not so difficult to realize that the child's potential to do certain things in the classroom is much beyond what is being done with other students. More than identifying this, it is critical that this information is discussed regularly with the teachers in school. It is critical not only because the child's potential would otherwise not be achieved, but also because the child may start feeling disinterested in school. This disinterest may result in participation in activities that may not be as fruitful as you would like them to be. A child's potential can be nurtured if the stakeholders provide a stimulating and supportive atmosphere.

Some experts may question that why should we expect a learner to do such activities at such a young age? It may be a question of debate to encourage reading and writing at such a young age but if a child shows natural disposition towards some activity then it should be encouraged carefully.

The teacher may not be able to address the needs of the child in a group but there are



aware of, and there are cases (like the one recollected above) where the talent of the child goes unrecognized at school. There are multiple reasons for this which range from overcrowded classroom with high teacher-student ratio, to the use of a

ways in which the child can be encouraged. For example: the teacher can use individualized instructions for her during individual activity time where she can be given tasks that are of her level. It's important that the child gets freedom to explore things on her own also as it's important that she keeps enjoying what she has enjoyed till now. If she is forced with tasks that do not interest her or that make learning too structured for her, it may make her disinterested.

The talents can be different in individuals and thus should be carefully observed. In fact if a child shows talent in academic areas, she still has a better chance to get support but if the talent is in non-academic areas then it may go unnoticed throughout her life. Thus as a parent if you recognize that your child has something better than expected then you should discuss it with the teachers and other experts. Although, every child is special for her parents, yet sometimes their special talents are ignored.



Give a chance to your child to blossom in the talent she has and she will show this by her interest in some specific activities. And finally, always remember, more than health

drinks, children require the expert guidance and support of the significant others around them.

Dr. Subhash Chander is Assistant Professor, Lady Irwin College, Delhi. He is actively involved and associated in various projects funded by UNESCO, MHRD and ETMA.

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[Back](#)



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Educational Opportunities in Human Resource Management



Aakanksha Tomar

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Human resource management is not just about recruitment and issuing salaries. HR professionals are responsible for the overall productivity of the organization, the growth of its employees, meeting the ongoing training needs of the employees, overall management of the employees, resolving key issues and areas of conflict, and retaining the best manpower through motivational programs, rewards, and incentives. Although companies vary considerably in terms of the HR practices and policies they follow, there is a certain set of standard policies and guidelines that is taught in most human resource management courses.

Eligibility:

Students with a bachelor's degree in about any discipline can opt for a master's in human resource management which is typically an MBA with specialization in HRM. Aside from MBA, some institutes also offer an MA degree in HR. Besides having a bachelor's degree, admission to a reputed B-school for an MBA requires that applicants take a common entrance examination, which they may choose depending upon the colleges of their choice. The main exams to get into a prestigious college for HRM are: CAT (Common Admission Test), SNAP (Symbiosis National Aptitude Test), MAT (Management Aptitude Test), and GMAT (Graduate Management Admission Test) to apply to universities abroad. Some schools are also offering bachelor's courses in HRM now. Students with 10+2 or an equivalent qualification are eligible for these.

Job Prospects:

We are currently living in a corporate age, a time where concerns about rapid economic growth are continually increasing. The management of human resources is especially important, and rather imperative, in a country like India where there is tremendous human potential to tap. Thus HRM is a lucrative career with immense opportunities of growth and financial rewards. The main streams in HRM are

recruitment, payroll, and training and development. HR managers and HR heads are counted among the top management in leading MNCs and organizations.

Remuneration:

Human Resource Management is a handsomely paying career choice. The highest paying skills associated with this job are Performance Management and Generalist Duties. Pay in this field rises steadily for more experienced workers, but goes down noticeably for employees with more than 20 years' experience. Most people move on to other jobs if they have more than 20 years' experience.

Institutes Offering:

Today there are numerous institutes that are offering an assortment of courses in HRM. But some of the best human resource management colleges in India are: Indian Institutes of Management at Kolkata, Ahmedabad, Bangaluru, Lucknow, Kozhikode, Indore, Shillong, Ranchi, Rohtak, Tiruchirapalli, Udaipur, and Kashipur; Xavier Labor Relations Institute, Jamshedpur; Management Development Institute, Gurgaon; Tata Institute of Social Sciences, Mumbai; Kurukshetra University, Haryana; Lucknow University, Uttar Pradesh; IMT, Ghaziabad; Aligarh Muslim University, Aligarh; Symbiosis International University, Pune; Sikkim Manipal University, Gangtok.



Rohini Singh

STUDENTS SPEAK |

What is Education?



Let's start with a standard definition of education: "education is the process of receiving or giving systematic instruction, especially at a school or university."

Now, to me the definition of education is something like this: "education is an enlightening experience through which we learn, understand, and live life."

No, it's not just the reading of school books, passing exams, and getting a job; education is much more than that. When you study you don't just remember the facts, you apply it in your everyday life. Weather it is learning a moral from a history lesson, or learning the mechanism by which a machine works. It's all education.

People often confuse being literate with being educated. Yes the definition for being literate is a person who can read, and that of being educated is a person who can read and write.

Although this definition of being educated might have worked in the past, but in today's progressing society is this definition enough?

There is a vast difference between being literate and being educated. A literate person may read, write, and understand but is not necessarily aware and responsible. The problem is that we are turning into a literate society instead of an educated society.

Education turns a person into a visionary, an intellectual and rationale entity. That is what the need of the hour is. Reading and writing is just not good enough; we need to comprehend and logically interpret our situations.

People think, "kids, all they are doing is rote learning!" Educationists are trying to simplify books and curriculum; but instead of that, why not keep the books the same and give a real life practical example with it? Global warming is an eminent threat is a fact, but realizing its danger is education. Water is a good conductor of electricity is a fact, but realizing not to touch an electric circuit with wet hands is education. Animals can't speak, but stopping someone from abusing one is education.

Education has helped everywhere around the globe in everything, be it the economic growth of a nation or the different sciences or business ventures. Without education we would never have had technology, internet, manuscripts from ancient history, the different techniques of rain water harvesting, medicines, etc. Look at India for instance. We used to be a country with farming as the main profession, no democracy, and so many prejudices; but now we are a developing nation with popular business entrepreneurs raging in the market, historians who are changing the way we look at history, and women CEO's leading top companies. India, which was a place where women were not educated so that they could concentrate on being

good wives when they grew up, has started treating women as equals in every way to men; we have made significant leaps in many academic areas like science and technology, mathematics, etc. These are some ways in which education has changed our thinking and is helping us walk shoulder to shoulder with other countries.

The young mind is vulnerable. The things we learn in school undoubtedly shape and impact our future choices and decision making - education can both open and close our minds. If a thought is thoroughly ingrained into our brains we come to accept it as truth. That is how powerful a tool education is, it doesn't help you just get a job, it shapes the way you look at life. Anything and everything is education.

I truly believe that if you want to see a change in anything, you can have it through education; by broadening not only your own mind, but that of others as well. It is the one and only thing that can change a person. It is a privilege that many are denied. It gives wings to the imagination, a spark to the hopeful, an idea to the crazy who believe they can change the world, a lesson to the wise, a message to the kind, and an indestructible weapon to the one who knows exactly what education is.

Finally, as the famous William Butler Yeats once said, "Education is not the filling of a pail, but the lighting of a fire."

Ms. Rohini Singh is an Under Graduate student at the University of Delhi.

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RTE-

Craftsmanship over Draftsmanship



Divita Yadav

Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among racial or religious groups. The right to education is also not an end in itself, but an important tool in improving the quality of life.

Initially, all the laws addressing education only reinvented slavery in a new form. The child who was employed was the first one to rise up in the house and the last one to go to bed. Also, the luring of mid day meal was not enough, since in school he got a

meal only for himself but when outside, working, he could very easily generate meals for his entire family.

RTE will give choice, social mobility, and independent thinking to the child. However, this law can only be implemented effectively from the grassroots and scarcely through governance solely at the centre or state level. Teachers, guardians, and local bodies are the entities that can really bring a difference

in the implementation of this law.

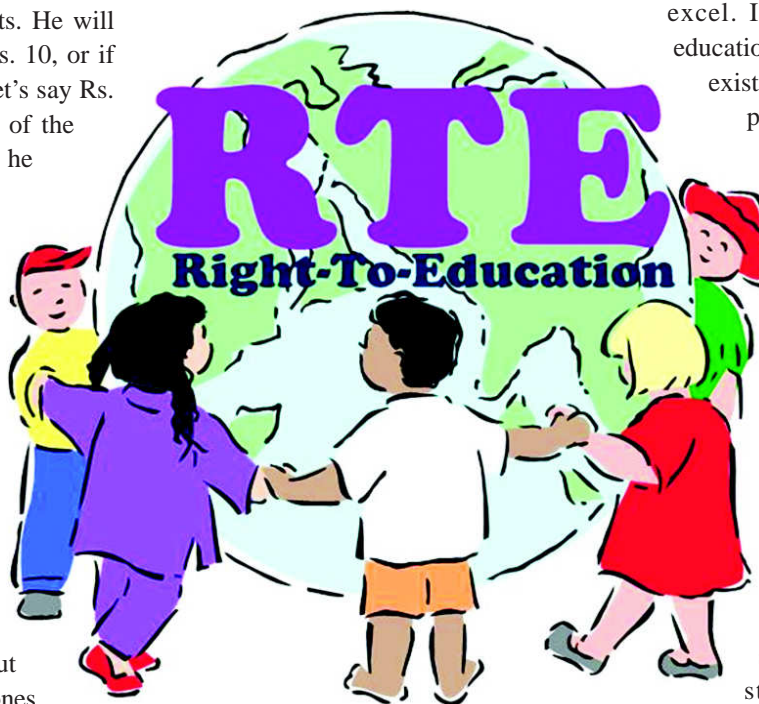
The law asks for the inclusion of government schools, neighbourhood schools, and unaided schools. But this law is liberally crafted not drafted. It says that such fee shall not be charged which prevents the child from getting an education. This is the most crucial clause and an amazing display of the elegant thinking of those who crafted this law. Now there will be more schools in remote and village areas; but an opportunist will open a school, will start giving free education, will apply for the reimbursement from the government, and then start analyzing the paying capability of the parents. He will examine if a parent can pay Rs. 10, or if someone can even pay more, let's say Rs. 100; through such an analysis of the paying capacity of the parents, he will raise the fee with a promise to focus more on the students whose parents pay more. This will make education an absolute business, irrespective of the quality of the education being delivered.

With private managements as the key players of this act, there will be no good payment for the teachers. These teachers might go to the rural areas and open their own schools and make an earning out of RTE. So at stake are also the ones who probably aspire to become teachers. The most alarming consequence of this clause is that it will make the elementary education commercialized.

The law directs the government to reimburse private schools for all the costs that they incur as per the 25% reservation for compulsory free education in their schools. But, it has been more than one year and the schools which started off with the successful implementation of the act are not financed back till now. As a result these private schools have increased the fee for those students whose parents are financially well off. This may not seem as

an immediate threat but when looked at from a distant vantage point, one can see that slowly the parents will come around and question as to why their money is being spent on the free education of those 25% students whom the government is believed to support? This will create a momentum against this act.

This tug of war between the centre and state to pay for education is making this act a little difficult to settle. Again, if the government is funding the minority schools then it can't exempt funding schools supporting RTE. The government can't



escape by giving statements like that of the HRD ministry which said that education is a social responsibility. The government can't turn its back on the law, after all when this law was constructed it was done without any contemplation regarding the involvement of the private management.

Also, quality is largely compromised in the act. It says no board examination till

elementary level. Everyone will be promoted so there are no parameters to say who passes and who fails, who has learnt and who hasn't. This will not ensure whether or not a child developed the capability to take the pressure of the next grade.

Nevertheless, there are several positive features in the Bill. These include the abolition of corporal punishment and introduction of syllabus closely linked to work skills for the future. Also, parental involvement is expected to increase. If a parent realizes that their child won't be able to do much without an education, thrust will come from parents for their children to excel. In fact, the assurance of free education tends to highlight the link that exists between lack of education and poverty.

But what needs to be brought under the spotlight is the attitude of the schools and the students who are already enrolled in them. Lately, with increasing incidents of derogation and insults of children from impoverished backgrounds, RTE has become an issue of our attitude towards the strata for whom this act was made. The whole purpose of reaching the unreached gets defeated the moment schools start looking down upon their students and instead of encouraging them and assessing their natural talents and polishing them, the teacher rather becomes a monster and takes the side of those students who hold nothing but a very negative opinion for children availing education under the RTE.

The implementation and results will take time but what is worthwhile is that a beginning has been made.

Ms. Divita Yadav is a Postgraduate in psychology from the University of Delhi. She is currently exploring the art of painting as a form of healing.

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[Back](#)

Emotionally Illiterate 21st Century Learners



Arunima Naithani

“Educating the mind without educating the heart is no education at all” - Aristotle

The contemporary trends in student centered approach are oriented towards honing existing cognitive skills of students for academic excellence. This excellence is achieved by integrating new innovations, advanced pedagogies, latest technologies and quality curriculum to enrich students with new skills and enhance learning experience for greater academic intelligence in students. And all these amalgamate to develop intelligent future-ready students for the 21st century competitive world.

Ironically, at the same time these intelligent minds (with great IQs) are involved in irrational activities that are directly affecting their psycho-social lives. Research indicates that academic intelligence has little to do with emotional life; people with high IQ can be stunningly poor navigators of their private lives. The prevalent cases in schools of bullying, suicide, depression, drugs, negative peer pressure, taking uninformed decisions, juvenile arrest etc. need proper attention. Such cases are buried inside the

classrooms to retain the public reputation of the school.

~~ In 2007, a deadly school shooting took place that alarmed the entire nation and school education fraternity. In this horrific case, a 14 year old was shot four times by a pistol in the corridor of the school by two students from the same year due to disagreements.

~~In a very recent case of Bullying, video showing two class VI students bullying their senior going viral on social media have raised serious concern among both parents and school management. Those students tagged as ‘aggressor’ have been rusticated from the school as the management does not want to hamper the future of other students.

These students convicted of murder and bullying are few evident examples of the same ‘future-ready’ transforming classrooms, which are also creating emotionally incompetent 21st century learners.

The question today is – Has anyone looked into the lives of these convicted students with emotional deprivation? Is expelling convicted students from schools an only option for school administration? Has the school fraternity invested any time to address today’s most alarming and disturbing deficiency in students that is emotional illiteracy? Have schools in India considered the



plights of today’s children, their dropping levels of emotional competencies? Can teaching of Life Skills Curriculum infuse emotional skills in students to make them emotionally literate? Is life skills programme in itself competent enough to transact skills for social and emotional well being?

Signs of the deficiency can be seen in violent incidents in medical colleges, universities and now in schools. Emotionally disturbed adolescents, teenage turmoil and troubles with children are becoming more common nowadays with growing number of depression among youths, violence, suicide cases and school/college drop-outs. With the stringent system, the school educators and administrators care more about how well school children can read, write and perform than whether they’ll be alive next week! While expensive efforts are being made to achieve academic standards, this unnoticed and disturbing emotional deficiency in students is still not being addressed as an issue of concern yet and integrated in the standard school curriculum, still ineffective.

IQ contributes only about 20% to the factors that determine life success, leaving 80% to other factors that, determine ones personal excellence. The key set of these other factors are *abilities such as being able to motivate oneself and persist in the face of frustration; to control impulse and delay gratification; to regulate one’s mood and keep distress from swamping the ability to think; to empathize and hope.*¹

Thus, it’s time for schools and parents to take active interest and steps to nurture positive emotions in controlling destructive



negative emotions. These crucial and important emotional competencies such as self-awareness skills, managing emotions, self-motivation, empathy, and handling relationships by managing emotions in others can be learned and improved upon children by schools and parents. Schools apart from promoting academic education should also invest in delivering emotional education to children by integrating and teaching within the standard school practices to make our 21st century learners emotionally literate.

Lastly, ETMA is making an effort to equip parents and school educators to deal with emotional deprivations and to help children in her/his emotional development so that s/ he grows with sound emotional intelligence through an online parenting course.

*To know more about Online parenting course log on to: <http://www.wiziq.com/course/45694-the-prepared-parent-an-introduction>

¹ Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books.

For more information on emotional literacy books and courses Daniel Goleman (1995), in his book Emotional Intelligence (Why it can matter more than IQ), provided insight and direction to help address this dilemma. Goleman described the emotional components that often cause people with high IQs to fail and people with modest IQs to succeed beyond anyone's expectations and The Collaborative for the Advancement of Social and Emotional Learning (CASEL), website: <http://www.casel.org/>

Back

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PHYSIOLOGY *of* Brain Functions



Dr. Rajesh Acharya

The brain is a complex organ that serves as the centre of the nervous system. It is located in the head, usually close to the primary sensory organs for such senses as vision, hearing, balance, taste, and smell. In a typical human the cerebral cortex (the largest part) is estimated to contain 15–33 billion neurons each connected by synapses to several thousand other neurons. These neurons communicate with one another by means of long protoplasmic fibers called axons, which carry trains of signal pulses called action potentials to distant parts of the brain or body targeting specific recipient cells.

Physiologically, the function of the brain is to exert centralized control over the other organs of the body. The brain acts on the rest of the body both by generating patterns of muscle activity and by driving the

secretion of chemicals called hormones. This centralized control allows rapid and coordinated responses to changes in the environment. Some basic types of responsiveness such as reflexes can be mediated by the spinal cord or peripheral ganglia.

Even after extensive research in neuroscience, the exact mechanisms by which brain activity gives rise to consciousness and thought production still remain unanswered. The most promising theory treats the brain as a biological computer, which acquires information from the surrounding world, stores it, and processes it in a variety of ways, analogous to the central processing unit (CPU) in a computer.

Grossly, the interior of the brain consists of areas of so-called grey matter, with a dark

color, separated by areas of white matter, with a lighter color. *Gray matter* is made of mostly unmyelinated neurons whereas the *White matter* is made of mostly myelinated neurons that connect the regions of gray matter to each other and to the rest of the body. Myelinated axons transmit nerve signals much faster than unmyelinated axons do. A myelinated axon is wrapped in a fatty insulating sheath of myelin, which serves to greatly increase the speed of signal propagation.

Cellular Structure

Brain cells can be broken into two groups: *neurons and neuroglia*.

Neurons, or nerve cells perform all the communication and processing within the brain. Sensory neurons entering the brain from the peripheral nervous system deliver information about the condition of the body and its surroundings. Most of the neurons in the brain's gray matter are interneurons, which are responsible for integrating and processing information delivered to the brain by sensory neurons. Interneurons send signals to motor neurons, which carry signals to muscles and glands.

Neuroglia, or glial cells, act as the helper cells of the brain; they support and protect the neurons. In the brain there are four types of glial cells: astrocytes, oligodendrocytes, microglia, and ependymal cells. Glial cells (also known as *glia* or *neuroglia*) come in several types, and perform a number of critical functions, including structural support, metabolic support, insulation, and guidance of development. Neurons generate electrical signals

that travel along their axons. When a pulse of electricity reaches a junction called a synapse, it causes a neurotransmitter chemical to be released, which binds to receptors on other cells and thereby alters their electrical activity.

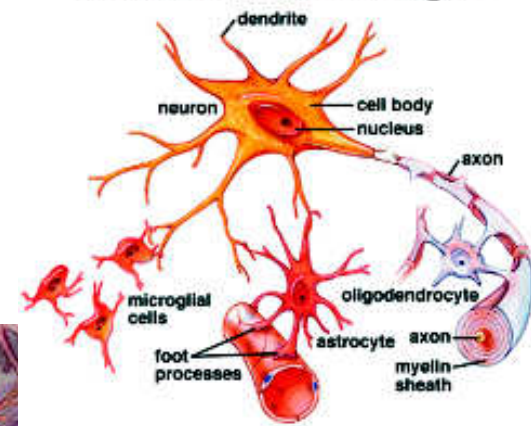
Neurons, however, are usually considered the most important cells in the brain. The property that makes neurons unique is their ability to send signals to specific target cells over long distances. They send these signals by means of an axon, which is a thin protoplasmic fiber that extends from the cell body and projects, usually with numerous branches, to other areas, sometimes nearby, sometimes in distant parts of the brain or body. Axons transmit signals to other neurons by means of specialized junctions called synapses.

A single axon may make as many as several thousand synaptic connections with other cells. When an action potential, travelling

along an axon, arrives at a synapse, it causes a chemical called a neurotransmitter to be released. The neurotransmitter binds to receptor molecules in the membrane of the target cell. Neurons often have extensive networks of dendrites, which receive synaptic connections. Most of the space in the brain is taken up by axons, which are often bundled together in what are called *nerve fiber tracts*.

Metabolism

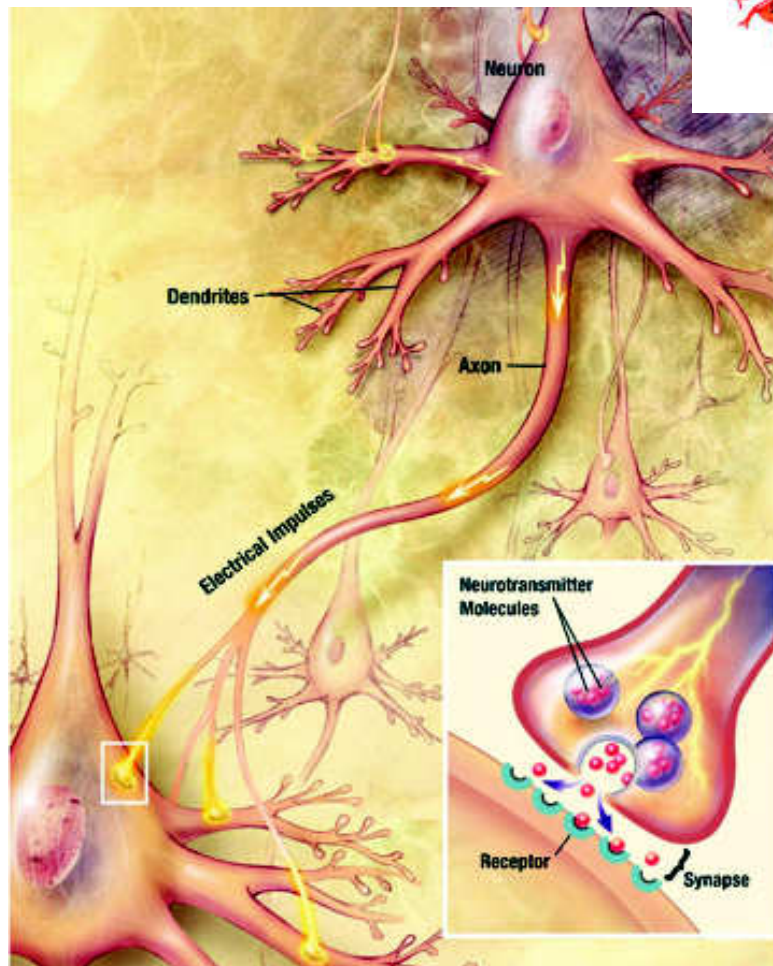
Neurons and neuroglia



The brain consumes as much as 20% of the oxygen and glucose taken in by the body. Nervous tissue in the brain has a very high metabolic rate. Large volumes of blood must be constantly delivered to the brain in order to maintain proper brain function. Any interruption in the delivery of blood to the brain leads very quickly to dizziness, disorientation, and eventually unconsciousness.

Sensory

The brain receives information about the body's condition and surroundings from all of the sensory receptors in the body. All of this information is fed into sensory areas of the brain, which put this information



together to create a perception of the body's internal and external conditions. Body temperature, heart rate, and blood pressure are all autonomic senses that the body receives. Other information is somatic sensory information that the brain is consciously aware of. Touch, sight, sound, and hearing are all examples of somatic senses.

Motor Control

Our brain directly controls almost all movement in the body. A region of the cerebral cortex known as the motor area sends signals to the skeletal muscles to produce all voluntary movements. The basal nuclei of the cerebrum and gray matter in the brainstem help to control these movements subconsciously and prevent extraneous motions that are undesired. The cerebellum helps with the timing and coordination of these movements during complex motions. Finally, smooth muscle tissue, cardiac muscle tissue, and glands are stimulated by motor outputs of the autonomic regions of the brain.

Learning and Memory

The brain needs to store many different types of information that it receives from the senses and that it develops through thinking in the association areas. Information in the brain is stored in a few different ways depending on its source and how long it is needed. Our brain maintains short-term memory to keep track of the tasks in which the brain is currently engaged. Short-term memory is believed to consist of a group of neurons that stimulate each other in a loop to keep data in the brain's memory. New information replaces the old information in short-term memory within a few seconds or minutes, unless the information gets moved to

long-term memory.

Long-term memory is stored in the brain by the hippocampus. The hippocampus transfers information from short-term memory to memory-storage regions of the brain, particularly in the cerebral cortex of the temporal lobes. Memory related to motor skills (known as procedural memory) is stored by the cerebellum and basal nuclei.

Homeostasis

The brain acts as the body's control center by maintaining the homeostasis of many diverse functions such as breathing, heart rate, body temperature, and hunger. The brainstem and the hypothalamus are the brain structures most concerned with homeostasis.

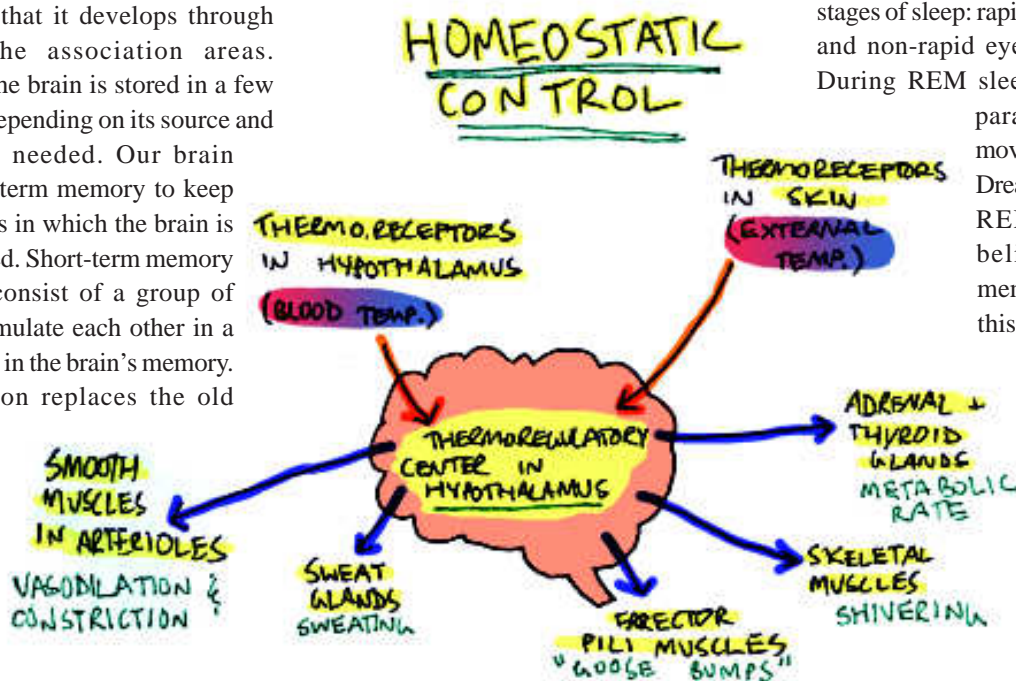
In the brainstem, the medulla oblongata contains the cardiovascular center that monitors the levels of dissolved carbon dioxide and oxygen in the blood, along with blood pressure. The cardiovascular center adjusts the heart rate and blood vessel dilation to maintain healthy levels of dissolved gases in the blood and to maintain a healthy blood pressure. The medullary rhythmicity center of the medulla

monitors oxygen and carbon dioxide levels in the blood and adjusts the rate of breathing to keep these levels in balance.

The hypothalamus controls the homeostasis of body temperature, blood pressure, sleep, thirst, and hunger. Many autonomic sensory receptors for temperature, pressure, and chemicals feed into the hypothalamus. The hypothalamus processes the sensory information that it receives and sends the output to autonomic effectors in the body such as sweat glands, the heart, and the kidneys.

Sleep

The brain is extremely active during sleep. The hypothalamus maintains the body's 24 hour biological clock, known as the circadian clock. When the circadian clock indicates that the time for sleep has arrived, it sends signals to the reticular activating system of the brainstem to reduce its stimulation of the cerebral cortex. Reduction in the stimulation of the cerebral cortex leads to a sense of sleepiness and eventually leads to sleep. In a state of sleep, the brain stops maintaining consciousness, reduces some of its sensitivity to sensory input, relaxes skeletal muscles, and completes many administrative functions. There are two main stages of sleep: rapid eye movement (REM) and non-rapid eye movement (NREM). During REM sleep, the body becomes paralyzed while the eyes move back and forth quickly. Dreaming is common during REM sleep and it is believed that some memories are stored during this phase. NREM sleep is a period of slow eye movement or no eye movement, culminating in a deep sleep of low brain electrical activity. Dreaming during NREM sleep is rare, but memories are still processed and stored during this time.



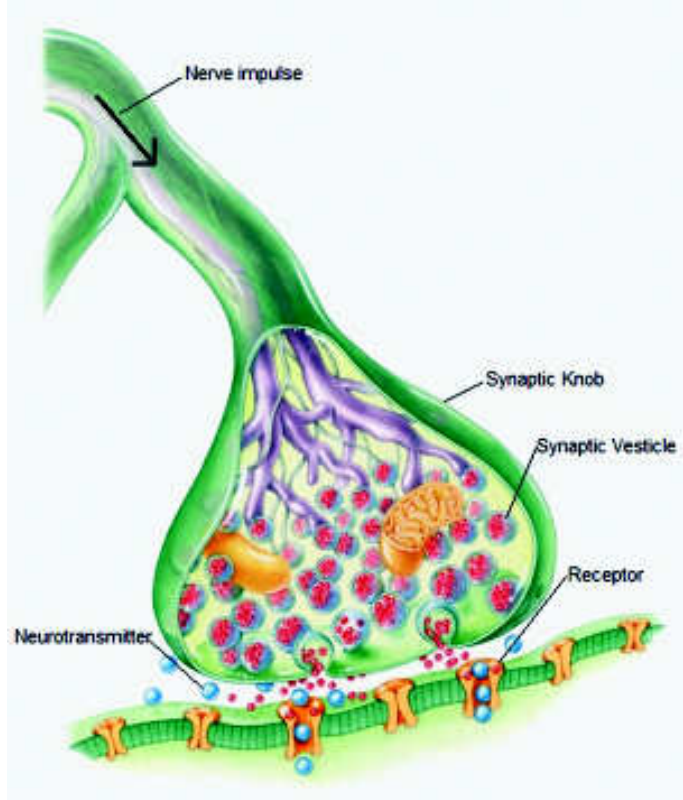
Reflexes

A reflex is a fast, involuntary reaction to a form of internal or external stimulus. Many reflexes in the body are integrated in the brain, including the pupillary light reflex, coughing, and sneezing. Many reflexes protect the body from harm. For instance, coughing and sneezing clear the airways of the lungs.

Neurotransmitters and receptors

The functions of the brain depend on the ability of neurons to transmit electrochemical signals to other cells, and their ability to respond appropriately to electrochemical signals received from other cells. The electrical properties of neurons are controlled by a wide variety of biochemical and metabolic processes, most notably the interactions between neurotransmitters and receptors that take place at synapses.

Neurotransmitters are chemicals that are released at synapses when an action potential activates them—neurotransmitters attach themselves to receptor molecules on the membrane of the synapse's target cell, and thereby alter the electrical or chemical properties of the receptor molecules. With few exceptions, each neuron in the brain releases the same chemical neurotransmitter, or combination of neurotransmitters, at all the synaptic connections it makes with other neurons. Thus a neuron can be characterized by the neurotransmitters that it releases. The two neurotransmitters located widely in the human brain are glutamate, which almost always exerts excitatory effects on target neurons, and gamma-aminobutyric acid (GABA), which is almost always inhibitory. Neurons using these transmitters can be found in nearly every part of the brain. Because of their ubiquity, drugs that act on glutamate or GABA tend to have broad and powerful effects. Some general anesthetics act by reducing the effects of glutamate; most tranquilizers exert their sedative effects by enhancing the effects of GABA.



Electrical activity

As a side effect of the electrochemical processes used by neurons for signaling, brain tissue generates electric fields when it is active. When large numbers of neurons show synchronized activity, the electric fields that they generate can be large enough to detect outside the skull, using electroencephalography (EEG). EEG recordings, along with recordings made from electrodes implanted inside the brains show that the brain is constantly active, even during sleep. Each part of the brain shows a mixture of rhythmic and nonrhythmic activity, which may vary according to behavioral state. In mammals, the cerebral cortex tends to show large slow delta waves during sleep, faster alpha waves when the animal is awake but inattentive, and chaotic-looking irregular activity when the animal is actively engaged in a task. During an epileptic seizure, the brain's



Brain electrical activity recorded from a human patient during an epileptic seizure

inhibitory control mechanisms fail to function and electrical activity rises to pathological levels, producing EEG traces that show large wave and spike patterns not seen in a healthy brain.

Prof. (Dr.) Rajesh Acharya, MBBS, MS, MCh(Neurosurgery), Fellowship from USA. Senior Consultant Neurosurgeon, Sir Ganga Ram hospital, New-Delhi.

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Back



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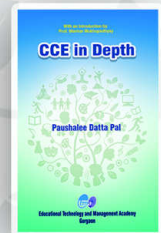
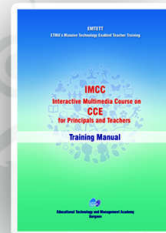
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Innovation in Value Education



Bhumika Kapoor

Recently, I had one of the most profound conversations of my life. My ten year old niece was visiting me and we were talking about some inane things over cookies and Harry Potter movie marathon. Over the course of the dialogue, I inquired about how she was doing at school, to which she nonchalantly responded, “Rubbish! I’m not learning anything there.”

An excerpt from our conversation:

Me: C’mon, don’t say that! I’m sure they are teaching you loads of stuff.

Tessa (sighs): Nothing of any real importance.

Me: You may think that right now, but a lot of what you’re being taught does have real life significance and application.

Tessa: You know, I don’t understand it when mum says studying hard will make me a good girl. Does it make us better human beings?

Me: Yes! It definitely is a contributing factor. And you must be having Value Education classes! Don’t they teach you about “being a better person” there?

This question ultimately led to a long monologue, in which my ten year old niece explained to me why exactly is ‘teaching Value Education’, a futile effort.

When I was asked to write something on Classroom Innovations, I initially had a very different idea in mind. However, my conversation with this child, and subsequently with some other children as well (wherein, the youngest was as young as nine years old and the oldest was an eighteen year old college student), prompted me to write about ‘Innovation in

Value Education’.

I remember reading CBSE’s ‘Values Education: A Handbook for Teachers’ sometime back. It beautifully delineates their vision for enhancing value based practices, with amazing ideas for integrating value based thought with a variety of subjects and activities. However, I cannot help but wonder: Do most schools actually follow these guidelines? Are teachers at all levels capable of initiating and properly facilitating this procedure? Are students even aware of the underlying implications of the various activities that are supposed to generate good values in them?

When I was in school, we had a subject on moral education which most of us absolutely loved. Not because it offered us any serious insights about life, but because it was the most scoring of the lot. The text basically comprised of a tiny booklet, filled with sayings and hymns and short stories containing anvil-sized, monochromatic moral lessons. Sometimes, we would even conduct *havans*. And, during the examination we all produced very positive, politically correct, socially desirable answers, which always garnered almost full marks.

Now, when Value Education is being given a very significant status, things haven’t changed much in practice since then. Sure, with our newfound dependence on multimedia techniques, teachers now make use of movies (most often, these are not followed by any discussions) and power-



point presentations to 'impart' knowledge, instead of reading from just textbooks. Students are now required to pick a suitable topic and make posters or models or project reports, signaling their increasing sophistication in value-based thought. However, from what I've gathered based on my discussions with some students, this is where the 'innovation' in Value Education has come to a halt.

In many institutions, Value Education is being treated as just any other subject wherein the teacher 'teaches' children certain facts and lessons about constructs such as harmony, love, compassion, honesty, etc. This simply doesn't suffice. As long as we don't take the ontological and epistemological aspects of the subject matter into consideration, its significance will remain lost for students and it will never lead to any real understanding. In case of Value Education, 'teaching' is just one step away from preaching- often filled with lessons which are presented as black/white in nature; comprising of words such as "should", "must", and "ought to". Students mostly remain passive participants and often become very adept at pretending to agree and understand. This makes it a pretty bad simulation of real life issues, with little external bearings.

Therefore, if we wish to enhance value

based behaviors in students, it is imperative that the following points are kept in mind:

1. Internalization of values does not take place if students are simply situated at the recipient end of the continuum. The focus should be on enhancing active participation of all students and then generating a discourse, wherein students can locate themselves.
2. It is important to understand that our experiences cannot be looked at simply through the myopic lens of 'Black or White'. In the real world, the distinction between the 'good' and 'bad' is very blurred. This is mostly the biggest source of dissonance for children and adolescents, and thus, it should be adequately addressed, and if possible, resolved.
3. Any kind of learning happens best within a context. The same is also true for value based learning too. Inculcating values through tying them another activity is helpful, but only when this relationship is brought to conscious awareness.
4. Cinema and Literature are two of the

most popular methods used at various institutions for enhancing value based learning. This is usually followed by students submitting a review of the movie or the text in return. Yet, the absence of any kind dialogic reflections seriously curbs this experience.

5. Finally, engaging in imposition of values is possibly the most fatal error that people often end up committing. This only generates compliance, and in worse cases indifference or reactivity.

For teachers and facilitators, bringing forth innovation in the field of Value Education not only requires a lot of cognitive and behavioral changes, but also a substantial amount of emotional intelligence. As far as the students are concerned, all they need to do is to have an open heart (and hopefully, eyes and ears too!).

Me: Are you sure you're only ten years old?

Tessa: Yes.

Me: You have no right to be this disillusioned yet!

Ms. Bhumika Kapoor is a Doctoral student at the Department of Psychology, University of Delhi.

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[Back](#)

Educational Technology and Management Academy (ETMA)

ETMA is a non- government, non-profit registered Trust Institution working in technical and management education, higher, school and vocational education. ETMA pioneers in research and development in education; helps and advices governments on educational policies and reforms agenda; collaborates with private enterprises in establishing and managing educational institutions and quality management; offers capacity building programmes to management, principals, teachers and non-teaching staff; and offers life skill programmes to students.

Vision: Pioneering innovations for improving quality of education at all levels

Mission: ETMA's Mission is to create a synergy between latest developments in science of education and leaning with culturally embedded modern management. ETMA is Quality Focused, Research-Based, and a Creative Spirited Institution.

I come from a very long line of teachers and I suppose that this is what made me love the days I spent as a teacher. I did not have to look too far back for role models. Grandfather, father, brothers, sister, and brother-in-laws were all excellent teachers and loved their profession. While some received official recognition, most of them were respected and remembered by their students as inspirational. And I believe that is the greatest reward that a teacher could ever aspire for. I have some very precious memories of my days as a teacher. I'd like to recollect one such experience here.

One day as I sat correcting my students' social studies homework books (these were standard 9 books I think), I saw something written in Tamil. I found that it was a poem written in Tamil, however, with a lot of spelling mistakes.

While returning the books to the students, I asked this particular student (let's call him Ramesh) to collect his book from me from the staff room. When he came to take the book back, I asked him about the Tamil verse, but he was very hesitant to say anything about it. However, with a little prodding and the understanding that I was not angry with him, he said that he wrote the verse himself and explained that while doing his homework certain ideas came to him and he had to write them down, then and there. I discussed this with his Tamil teacher and showed her the poem. She took one look at it and said in a rather angry tone, "tell Ramesh to stop all this nonsense and let him learn to write proper Tamil without mistakes."

I was extremely surprised at her reaction because I felt that the poem was quite beautiful. Besides, I firmly believe that expressing any feeling in verse is a God given gift and a talent, which, if possible, should be nourished and encouraged. With this conviction, I took Ramesh's notebook to another Tamil teacher to seek her opinion. When she read the poem, her face lit up with great surprise and said, "It is beautiful!



My Happy Experiences as a Teacher

Padma Prabha Rao

Who has written this? Of course there are some mistakes and it does not confirm to the grammar of poetry writing but the idea is beautiful. Honestly, even though I have done my Master's in Tamil, I can hardly write any poetry."

Sensing a brilliant prospect here, I put Ramesh in her care and from then on he would write poetry when a thought compelled him to write, she would help him

rewrite it. This happy relationship between them continued long after he left school. After many years when I met my friend, the Tamil teacher, she told me that Ramesh was at the point of publishing a poetry book and he had mentioned me as his well-wisher and mentor in the foreword.

I feel happy that God gave me an opportunity to spot a talent and help him to progress.

Ms. Padma Prabha Rao has been a teacher in a Higher Secondary School in Chennai; she is now retired and helping blind children with their studies.

[Back](#)



A Career in the Indian Army:

A Soldier's Perspective

The youth today has a very wide array of career choices and in this *dhobi's* list, the Armed Forces or the Indian Army is one of the options.

Young hopefuls approach the choice of career in the Army as exactly this— one of the many choices. However, there is a fundamental difference between a career in the Indian Army and the rest. Whatever the engagement, no other career takes over all your being. Army is a way of life and not just another career. The Army will consume you, subsume you— require your full and complete surrender of identity. There is no life beyond the Army, especially in the initial years. And the Army is not a monolith— the same all over. There are tremendous variations. Life and service conditions in the infantry are incredibly more difficult and life threatening than, say, the Army Ordnance Corps. The technical arms like Signals, Engineers, and Electrical and

Mechanical Engineers have an ambience and quality of life radically different from the infantry. This is not to say that the Army Ordnance Corps is less of an Army; but Army Ordnance Corps and Infantry are very different. While the mechanics of getting into the Army can be gleaned from people, organizations and the internet, it is more difficult to know what one is getting into. The aim of this article is to give an overview of career in the Indian Army.

Ran Vijay Singh

AVENUES TO APPLY FOR COMMISSION IN THE INDIAN ARMY

General

There are many avenues to enter the Indian Army as a Commissioned Officer at the Under Graduate, Graduate, and Post Graduate levels. One can even join as a *jawan* and then get commissioned as an

Officer. Most of the information to get recruited as Junior Commissioned Officers, Non Commissioned Officers, Other Ranks and Commissioned as an Officer in the Indian Army is available on the website joinindianarmy.nic.in. Another website with information on the Indian Army is www.indianarmy.gov.in.

The joinindianarmy.nic.in site has all information and links for the Indian Army, Indian Navy, Indian Air Force, UGC, and UPSC. For girls, the avenues for Commission in the Indian Army include the Short Service Commission Technical & Non-Technical, Judge Advocate General, Army Education Corps, and Medical as Doctors and Nurses. Most of the options are for men only. Some options are through the UPSC, but there are a large number of options directly with the dealing sections of the Integrated HQ of Ministry of Defence (Army). Men and women can apply for commission with NCCB Certificate (non-UPSC) also. Except for Doctors

and Nurses, in all other categories, Services Selection Board (SSB) interviews are compulsory. Most categories are for unmarried candidates only. It is safe to assume that only entry as a qualified doctor or qualified nurse is available to married (or divorced/widows/widowers) candidates. While most of the Commissions are open to Indian Citizens only, citizens of some foreign countries can also apply (e.g., Nepal, Bhutan, etc.) subject to necessary certificate being given by the Government of India. At present, we have a serving Major General, who is a Nepali Citizen. Age, education, subjects, percentage marks, medical, number of attempts at passing the qualifying exam are some of the criteria for applying. These vary based on type of commission and must be checked on the internet sites before applying. The Employment News generally carries all the notifications for commission entries.

Under Graduate Level

National Defence Academy (NDA) Khadakvasla.

With minimum qualification 12th pass, men can apply through the UPSC. Vacancies are for the Army, Navy, and Air Force. After a written exam, there is SSB interview and medical. Admission is by merit for medically fit candidates only.

Technical Entry Scheme.

This is a non-UPSC entry for men with Physics, Chemistry, and Mathematics at the 10+2 level. One applies to the Recruiting



Directorate. Based on certain criteria, candidates are shortlisted for SSB. SSB pass candidates undergo medical. Based on merit, they are sent for training to Officers Training Academy (OTA) Gaya for one year and thereafter three years in other technical training institutes.

Graduate and Post Graduate

Indian Military Academy Dehradun.

After Graduation, through the UPSC, men can apply. The selection procedure is the same as NDA. The written exam is the Combined Defence Services Examination.

University Entry Scheme (UES).

This is a non-UPSC entry. In their third year in engineering college, men can apply to the Recruiting Directorate. Candidates are interviewed in their fourth year and selected

candidates sent for SSB. Medical is conducted for candidates who pass the SSB. Selected candidates are paid college fee for their final year of college. Thereafter, they are trained at IMA.

Technical Entry Scheme (TES).

Male candidates in their BE/B. Tech final year and degree holders can apply to the Recruiting Directorate. Selected candidates are sent for SSB. Medical is conducted. Selection is by merit. (Non-UPSC entry scheme)

Short Service Technical SS (Tech).

With a Degree in engineering, male and female candidates can apply to the Recruiting Directorate. Rest is as per the TES. (Non-UPSC entry scheme)

Army Education Corps (AEC).

Post Graduate male candidates with first or second division in specified courses can apply to the Recruiting Directorate. Rest is as per

the TES. (Non-UPSC entry scheme). For women, the entries are being finalized.

Judge Advocate General (JAG).

Qualified Lawyers can apply to the Recruiting Directorate. Procedure is as per TES. (Non-UPSC entry scheme)

Territorial Army (TA) Officers.

Gainfully employed Graduates in the age group 18 to 42 years (less employed in Police and Para Military Forces) can apply to the TA Group Headquarters of the State. There is a written exam, an interview by an interview board, SSB interview, and medical.

Doctors and Nurses.

Indian citizens both male and female, who have passed their final MBBS examination in first or second attempt, can apply for

Contd. on P 40



P.G. Kamath

Education without Values- Who Is To Blame?

'Education without values makes a man a more clever devil', said CS Lewis- a novelist, theologian, and academic of the last century. As I look around people today, I personally feel that the next half century is an opportune time for India and Indians to explode in to the world and occupy positions of pre-eminence. India has 65% of her population below the age of 35 years and 50% of her population below the age of 25 years. This is the time when the world is aging, it is for India to make use of her demographic dividends and forge ahead in the world. The question is can we do it?

Though an incorrigible optimist, I cannot

help harbouring doubts of our ability to maximise the future. The quality of education in our country is dismal. India has the largest number of adult illiterates in the world that is estimated to be 287 million, accounting for 37% of the world's adult illiterate population. The standard of our education is not dependent on few elite schools in the cities. Our educational standard is directly dependent on the quality of education we can impart in our government schools, where the bulk of our children study. The 'Right of Education Act' is a step in the right direction; however its woeful implementation is a matter of concern as there is a fear that it may also land up as

thousands of other laudable schemes that have met their demise due to our inability to execute them.

As I see the youth today, I also feel that even in our elite schools the education is not wholesome. I see children, who have no concern for the society that we live in. I see litter being strewn across the streets and in public places. Even when a dustbin is close at hand most of us do not bother to use it. We feel it is our right to dirty public places. Apart from this, reckless driving without any concern for other road users, with complete disregard to pedestrians, has become a norm. Jumping traffic lights is considered smart without realising that few innocent people may lose their lives for such indiscretions. Spitting with joyous abandon is again seen as a right even by young people. Spitting from buses and spitting the red concoction of betel leaves on the streets is taken as a primary requirement of citizenry. Urinating on the roadside is another menace that makes our heads hang in shame. Recent public welfare message anchored by Amir Khan hopefully drives a lesson home to some of us. Eve teasing is another ugly public behaviour engaged by our youths; a sure sign of frustrated and regressive society is on display in almost every city of India. The chivalry which, our young men were proud of through showing concern to the aged, ladies, children, and to the specially enabled people is not a common sight these days.

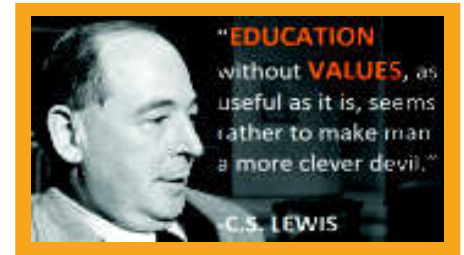
The society has become self-centred, selfish, and inward looking. Each one is for himself. Often we hear of how accident victims have been left on the roadside without any one volunteering to evacuate them to the hospital. As also, no eve teaser will have the guts to play mischief if the public is assertive and do their duty to help the victim. Complete apathy and lack of concern to fellow citizens has become a norm and is considered cool, as the alternative would be tardy and persistent harassment by cops and unending involvement in legal tangles.

Why has our society become so immune to fellow citizens? Isn't there a desideratum in our education that needs to be filled? Who is going to inculcate moral values and ethics in our future generation? I know it has to come from parenting and by setting personal examples by the elders in the family. However even the schools have to reinforce these values. There are stages in a child's growth when he sees his 'ideal' in his teacher. During such impressionable ages these values have to be ingrained and they would last a lifetime. Rest assured, it would also be passed on to the next generation. As a parent I feel our generation has let down the country in failing to provide education with values to our children at large.

It is never too late and correction can be done right from now. We elders can show

the way. Principals and teachers also should be motivated to cover these important aspects in their children right from kindergarten. Love for the parents, teachers, elders, and concern for the society, and patriotism to the country should be a part and parcel of school's formal education. The teachers also should be empowered in knowledge and attitude to teach the same to the children. In some situations even the parents would need such education so that the children do not face contradiction in what they are taught in the class and what their parents practise in real life. This aspect can be covered during the Parent-Teacher Meeting at school. A concerted action is required from all stake holders to improve our future generation.

The progress of a country lies in grooming their future generations. Parents and teachers build a country. We need to remind ourselves of our onerous duty to the country and empower our children for the world of tomorrow. We cannot miss this opportunity that is unfolding before us and only an educated and intelligent people can exploit it for the betterment of the country.



P. G. Kamath is retired Lt Gen of the Indian Army.

[Back](#)

A Career in the Indian Army...

Commission in the Army Medical Corps (AMC). The applicant must have permanent registration from a State Medical Council/MCI. Post Graduate degree holders i.e. MD/MS/MCh/DM can also apply. Commission is only after an internship. The maximum age is 45 years. Eligible candidates are called for interview by a Board of Officers at the Army Hospital (Research & Referral) New Delhi. Initially it is a short service commission (SSC). On completion of 2 years service, SSC officers can apply for Departmental Permanent Commission. There is an Army Dental Corps also. Commission is similar to the AMC. After 12th class, boys and girls can apply for admission to the Armed Forces Medical College, Pune to study and become Doctors in the Indian Army. The options for Military Nursing Service (MNS) are covered in the paragraph below.

Options for Girls

- (a) The options for girls for service in the Army are through Short Service Commission Women (NCC) (Graduate, non-UPSC), Short Service Commission Women (Technical) (Engineering

Graduates, non-UPSC), Short Service Commission Women Non-Technical (UPSC, Graduate), JAG Branch, Doctors and MNS. The method and means for all less MNS are as per the equivalent men categories.

- (b) For MNS, female candidates, there are two options. They can join after 12th class in the age group of 17 to 25 years as trainees who get commissioned on completion of training. There are two Courses at this stage. The four year B Sc Nursing course at the Army Colleges of Nursing and the three and a half years training for Diploma in General Nursing & Midwifery Course at Schools of Nursing at selected Army Hospitals. This option is open to unmarried/divorcee/legally separated/widows but not to married candidates. After PG/PB B Sc/B Sc Nursing from INC recognized University and registered as a Nurse and Midwife from a State Nursing Council, one can apply directly for Commission as a Nurse. Single/married/divorcee/widows can apply. The eligibility age is 21 to 35 years. Based

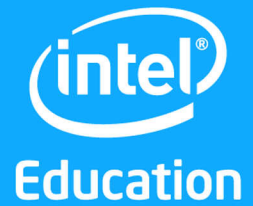
on notifications issued in newspapers, candidates have to apply to the Ministry of Defence (Army), Adjutant General's Branch, Directorate General of Medical Services (Army)/DGMS-4B, Room No 45, 'L' Block Hutments, New Delhi. Eligible candidates are called for a written test. The results of successful candidates are declared the next day. Candidates in order of merit are called for interview based on the number of vacancies. The candidates who clear the interview are subjected to medical Examination. Pregnant candidates are ineligible for Commission. Ante date seniority is given to MSc qualified candidates selected.

COMMISSION THROUGH THE RANKS

In addition to all the above, there are avenues of commissioning through the ranks. These include the Army Cadet College, Special Commissioned Officer (SCO), and Permanent Commission Special List (PC (SL)). For these avenues, a person has to be a soldier in the Indian Army.

Mr. Ran Vijay Singh is a high ranking officer of the Indian Armed Forces.

[Back](#)



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National Seminar on Classroom Innovations and Leadership



ETMA's 2014 seminar was inspired by a Quality Quest in education. It was designed to document and showcase innovations in classrooms and school leadership simultaneously with serious engagements with recent developments in our understanding of the process of human learning, innovations, and leadership that help fulfilling the quest for quality. The focus of this seminar was on school education. The seminar was organized in collaboration with Kendriya Vidyalaya Sangathan (KVS).

In celebration of the 50th year of KVS, in an eight-month run up to the seminar, ETMA held a nationwide competition on classroom innovations and school leadership for KV principals and teachers in collaboration with Kendriya Vidyalaya Sangathan. Classroom Innovations were sought in Science and Mathematics, Social Sciences, Language, Co-curricular Activities at primary, elementary, secondary, and higher secondary levels. Case citations on Leadership for Institution Building were called from Principals. 97 teachers and principals participated; entries were evaluated by a jury comprising experts of global fame from the USA, the UK, and India; 16 cases of classroom innovations and 3 cases of leadership were awarded at the inaugural function of the seminar.

A few highlights of the seminar are:

- Sri Vineet Joshi, Chairman CBSE inaugurated the seminar in presence of Prof. Dinesh Kumar, additional Commissioner, KVS; the seminar was chaired by Prof. Marmar Mukhopadhyay, Chairman, ETMA. Sri Joshi and Prof. Kumar distributed the awards to the winners of the competition.
- A new discourse on Leadership for Quality Quest was uncovered by distinguished academicians and management scientists: Prof. Satish Kalra from International Management Institute and Prof. J. K. Mitra from Faculty of Management Studies, University of Delhi; the discourse was moderated by Prof. M. M. Pant, Information Scientist.
- STEM, a recent initiative of Intel was presented to the audience by Ms. Shweta Khurana, Head (Education K-12), Corporate Affairs Group, Intel- South Asia, New Delhi; while Ms. Usha Bhaskar gave a presentation on Intel Teach Programme.
- Manish Gupta, Vice President and Director XRCI, Xerox India Ltd. presented an ethnography based research on technology in education.
- Dr. Vijaya Lakshmi, Joint Commissioner, KVS and Prof. Madhu Parhar, Founder Trustee of ETMA presented

systemic innovations with nation-wide outreach. Prof. Parhar flagged ETMA's four-year long research based innovation on alternative pedagogy for developing higher order thinking among students and technology enabled multimedia for training in CCE prepared by ETMA.

- f. Presentation and discussion on more than 20 cases on classroom innovations by teachers including 16 award winning cases.
- g. Discussion on leadership for institution building including 3 award winning cases and an open house on Leadership for Quality Quest steered by Prof. M. M. Pant, Prof. Satish Kalra, and Prof. Jay K. Mitra.



h. Prof. Swati Basu and Prof. Marmar Mukhopadhyay presented a case on Minimally Invasive Education: An innovative experiment of ETMA being implemented by HRTF in Udang.

i. Valedictory address was delivered by Prof. Dinesh Kumar, Additional Commissioner, KVS.

j. There was an overwhelming appreciation of the seminar, especially for its serious

empirical approach and highlighting accomplishments of principals and teachers from the grassroots by the participants. The seminar also received kudos at the social media, especially on Facebook.

- k. The seminar was held at the PHD House in Hauz Khas and was attended by more than 150 participants.

Prof. Indiresan's Memorial Book Release Function

P.V. INDIRESAN: IDEAS AND IDEALS

This book was released by Shri D.R. Kaartikeyan, on February 11th, 2014 at IIC, New Delhi.

Prof. Indiresan (1928-2014), served the higher technical education system for nearly 40 years, starting his career as a lecturer in the Roorkee University (now an IIT) and reaching the highest position as a Director of IIT Madras. This book, "P.V. Indiresan: Ideas and Ideals", is not just a narrative of a life of major events and achievements; it tries to capture what influence that life had on others, how he is remembered, and what has been the lasting impact on the world of that life. Prof. Indiresan is remembered as a creative and unconventional thinker, with clearly expressed ideas and views, not only in his primary professional areas of technology and educational administration, but also on various issues relating to urban and rural development, social and economic issues, politics and public policy, and so on.



The first part of the book is a life sketch to help the reader understand Prof. Indiresan as a person, not only from his own life but also the influence of his parents and his upbringing. The second part is a compilation of a small but representative portion of his numerous articles and speeches. This collection demonstrates the diversity of his thoughts and his practical, if unorthodox, approach to solving societal problems. The final part is a tribute to his life and achievements from the many people, his family, friends, colleagues, students and

other associates, whose lives he touched in many different ways throughout his life, often in deeply personal terms. It is a celebration of his life, and it is through his ideas and ideals, that we see the real narrative of his life.

Note: This book is priced **Rs. 400/-** in India, and **US \$ 15** outside India. The entire proceeds will be used for educating the bright and poor rural children from all sections of society. To place an order, contact Prof. V.S. Raju; drop a mail at, vsraju40@gmail.com

Meeting of the Academic Advisory Committee on School Leadership

An expert committee comprising practicing principals, management scientists, technologists, and instructional designers met at ETMA on 1st February, 2014 to discuss about the proposed long term course on Leadership for 21st Century Learning. The draft document/prospectus on the programme prepared in-house was discussed and approved with certain suggestions for further improvement. The programme is scheduled to be launched in May, 2014.



Inaugural Address at the India Learning Expo.

Prof. Marmar Mukhopadhyay delivered the Inaugural Address at the India Learning Expo, EPI Centre, Gurgaon on the 3rd of February, 2014. He shared his views on 21st century schools highlighting various attributes of 21st century learners. According to Prof. Mukhopadhyay, 19th century was the century of equity in education, 20th century stood for learning optimization, and the 21st century is for the optimization of human potential. He stressed on the fact that now is the time for excelling in all four planes of living, namely, physical, intellectual, emotional, and spiritual.



BEI at Udang

Mr. Karel Hajek and Adolfo Roitman visited Udang on the 5th of February, 2014. They met with the teachers from the SIP project and ETMA-HRTF's experimental school. Karel expressed his thoughts on his first visit to Udang in the following comment: "It was a very emotional and instructive experience for me, seeing the SIP school, its dedicated staff, and the happy children for the first time."



Activities and Contributions of ETMA Council and Staff Members (November 2013-February, 2014)

Prof. Marmar Mukhopadhyay

GPSC

On the 8th of February, 2014, Prof. Marmar Mukhopadhyay delivered the key note address on Technology Enabled Capacity Building of Teachers at GPSC, EPI Centre, Gurgaon. Prof. Mukhopadhyay showcased the Interactive Multimedia Course on CCE, using excerpts from the kit to demonstrate its contents and excellence.



Seminar

Prof. Mukhopadhyay chaired the inaugural and valedictory sessions of a Seminar organized by ETMA on 17-18 February, 2014. In his address, he presented the audience with a series of video clippings from the experimental school in Udang. Prof. Mukhopadhyay was joined by Prof. Swati Basu to present to the addressees a window into Minimally Invasive Education. The participants were thrilled to witness such new ways of learning.

VAR India Conference



On 21st February, 2014, Professor Mukhopadhyay delivered an address on ICT in education at the VAR India Conference on Education in India Merits Change at Park Hotel, New Delhi where he was invited as the Chief Guest.

Training Session on TQM

Prof. Mukhopadhyay conducted a training session on TQM for Principals and teachers of Bal Bharati Public Schools, at Bal Bharati Public School, Rohini, New Delhi on the 9th of January, 2014.



Sri Amit Kaushik, Vice-Chairperson of ETMA

Sri Amit Kaushik, with rich experience in government (Former Director (M/HRD, GOI) and private sector is the Hony. Vice-Chairperson of Educational Technology and Management Academy, Gurgaon. He was member of the ETMA Council since the Council was constituted. Sri Kaushik specialises in educational policy and planning, and management of educational projects and schemes.

National Education Summit, Gandhinagar, Gujarat

Prof. Marmar Mukhopadhyay delivered a keynote address on World Class Universities on 10-11 January, 2014. Referring to research studies, he contended that there is no documented evidence on the coinage of the concept of a "World Class University". The rankings published by various agencies are based on certain criteria and Indian universities must make efforts to fulfil the criteria to be in the TOP 100/200 universities in the world. However, India needs to choose between creating peaks of excellence for shining versus improving the quality of education.

Skills Conference, Hyderabad

Prof. Mukhopadhyay delivered the keynote address at the Skills Conference in Hyderabad on 12th December, 2013. He flagged the intricate relationships between skills and employability and challenges ahead for meeting the skill gaps. He presented the 3-D model of qualification, technical skills, and soft skills as the three dimensions of employability skills.



BVB's R. K. Sarda Vidya Mandir, Raipur

Prof. Mukhopadhyay was the Chief Guest at the Annual Function of BVB's R.K. Sarda Vidya Mandir on the 21st of December, 2013. He addressed a packed audience of more than 1500 parents and teachers on the need for parent-teacher partnership for quality school education.



Prof. Jaya Indiresan

Key Note Address at Pandit RaviShankar Shukla University, Raipur

Prof. Jaya Indiresan presented a paper titled 'Empowering Women in Science and Technology to Break the Glass Ceiling' as a Key Note Address at the inauguration of the symposium "Women as Leaders: Roles, Issues, and Concerns" held at the Pandit RaviShankar Shukla University, Raipur on 5th February, 2014. Prof. Indiresan started her address with



drawing attention to the fact that the working woman of the 21st Century has expanded her horizons significantly to include science and technology as career options to other fields such as teaching, medicine, and nursing which have traditionally been believed to be suitable career choices for women. She highlighted that even though statistics show a manifold increase in the percentage of women in jobs related to science and technology, women who have made it to leadership positions are still rather an exception than the rule. She

illustrated the factors hindering women from breaking this glass ceiling with the help of a pictorial depiction that included various personal, social, and structural factors. The professor concluded her paper with outlining the various concerns regarding women in leadership roles.

Paper Presentation at the International Conference on Life Skills and Livelihood Skills Challenges for International Cooperation

Prof. Jaya Indiresan presented a paper titled "Skill Training for Empowerment: A Study of Women in Agriculture" at the 2nd International Conference on Life Skills and

Livelihood Skills Challenges for International Cooperation, an event organised by Rural Economic and Educational Development Society (REEDS) in Hyderabad, from December 12-14, 2013. This paper focused on a case study of Skills Training imparted to rural women in agriculture supported by DANIDA in five states. The process adopted in training and its impact in terms of the sense of empowerment of the women in achieving socio-economic improvements in their life were highlighted.

Congratulations Prof. Satish Kalra (Member, ETMA Council)

Prof. Satish Kalra ranks among the Top Thought Leaders in Training and Development (T&D).

Two articles of Prof. Satish Kumar Kalra and Rashmi Kunzru (nee Raina) — Development of learned optimism scale (2001) and Emergence of the 'ekalavya' era (1988) were reproduced in the Indian Journal of Training and Development, 43(3), 2013. Prof. Kalra figures among the 18 top T&D professionals among the likes of Udai Pareek, P.N. Haksar, R.P. Billimoria, and Sharu S. Rangnekar.

This is an interesting event in professional journalism. The new Editorial team of the ISD journal dug into the archives of articles published in the Journal during the last four decades along with looking at some recent contributions; they selected a few articles that reflected the foresight of the earlier authors. Having two articles — one published in 1988 and another in 2001 — featured among the giants in the field is indeed creditable. We congratulate Prof. Kalra.

Dr. Subhash Chandra

Publications

- Human Rights and Gender Studies (2013-14). Textbook for CBSE grade XI.
- *Exploring Gender Stereotyping in Media and its Impact on Adolescent Learners in School Education* Confab Journal. February, 2014
- *Student Teacher's Perception and Preparedness towards Inclusive Education of Learners with Intellectual Disability*. Impact: International Journal of Natural, Applied and Social Sciences. February, 2014

Paper Presented:

Developing Little creativity Of Visually Challenged Learners In Science Classroom. International Conference on Research In Education And Curriculum Planning For Gifted Minds, Delhi. February, 2014.

Workshop:

Teaching Science to Children with Special Needs. Organised by Central Institute of Education. Faculty of Education. University of Delhi. February, 2014.

Seminar/Symposium:

Scienc Education of Women with Disability in India. Symposium on Women with disability. Organised by Central Institute of Education. Faculty of Education. University of Delhi. January 2014.

ETMA Glimpses



Upcoming
Conference



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SCIENCE OF HUMAN LEARNING

20 - 22 November, 2014, New Delhi

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Are our understanding and perceptions of human learning changing?

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Prof. Marmar Mukhopadhyay

(Chairman, ETMA Council) A distinguished research professor and author in Educational Management and Technology and an institutions builder, served as Director of NIEPA, Chairman of NIOS, Vice-President of ICDE, member of CABE and Chairman of CABE Subcommittee on USE.



Dr. Kailash Khanna

A committed teacher, educator and mentor of the budding teachers led the Department of Education, Lady Irwin College (Delhi University). She is regularly consulted by CBSE, NIOS, IGNOU and other major national educational institutions.



Prof. Madhu Parhar

Specialist in Instructional Design and Professor of Distance Education, IGNOU, she is an established author of educational literature with several research papers and books to her credit, an effective and sought after trainer of teachers.



Dr. Indu Khetarpal

An institution builder and a natural leader, she represents rich experience in organization and management in education; she leads Salwan Education Trust, Gurgaon Public School Conference and is a regular consultant/facilitator of CBSE programmes and projects.



Sri Amit Kaushik

Richly experienced in educational policy making, planning and implementation at the highest level in government of India, he has equally rich experience in working in directing high quality school network, education in NGO and corporate sector.



Prof. Jaya Indiresan

Former Head (Higher Education) in NIEPA and an author, she is a leading exponent of women empowerment with several major research and development projects to her credit; she has also worked on campus diversity.



Prof. M.M. Pant

An Information Scientist of distinction, he has served at IIT Kanpur and IGNOU in senior positions. Ideation, development and delivery of educational products, processes and services for the next generation learning space is his passion.

Prof. Satish Kalra

'Most Popular Professor' of management students and a leading expert in behavioral sciences and organizational development, he heads Corporate Relations at International Management Institute, and has significant interest and expertise in educational management.



Prof. V. S. Raju

Former Director of the Indian Institute of Technology (IIT), Delhi and Professor and Dean at the IIT, Madras. During his over 40-year academic career, he interacted extensively with industry as a consultant and at policy level, promoted Industry-Academia collaboration. He is also a member on various other committees and task forces, concerned with technical education and research.



Dr. Rajesh Acharya

Senior Consultant Neurosurgeon at Sri Ganga Ram Hospital, and was designated as Professor by Ganga Ram Institute of Post-graduate Medical Education and Research (#GRIPMER) He has a keen interest in scientific research and has published several papers in journals of international repute.



Prof. Abad Ahmad

Chair Professor of Rafi Ahmad Kidwai Chair at the Centre for Management Studies in Jamia Millia Islamia. His areas of specialization are Applied Behavioural Science, Organizational Development, and Strategic Management. He was instrumental in designing and launching the first full-fledged University-based full-time MBA Course at the University of Delhi in the year 1967.



Dr. Subhsah Chandra

Assistant Professor, Lady Irwin College, Delhi. He has done his Ph.D. in the field of inclusive education with an emphasis on science education and visual impairment. He is actively involved and associated in various projects funded by UNESCO, MHRD and ETMA.



Ms. Rita Kapur

Executive Director, Delhi Public School, Ghaziabad Society, Ghaziabad, Uttar Pradesh. She received National Award for Teacher in the year 2005. Her area of specialization is school leadership.



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