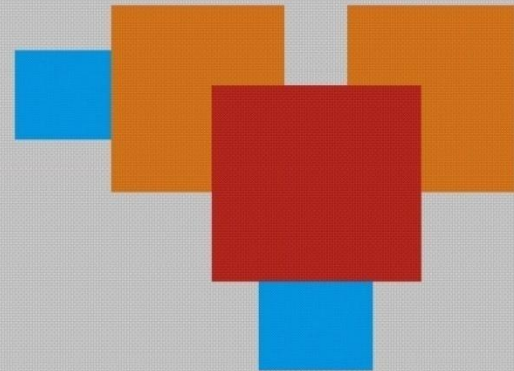


# Conversations with Prof. MM Pant on Matters Educational



Prof. M.M. Pant



[www.mmpant.net](http://www.mmpant.net)

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0001  
2<sup>nd</sup> July 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



**Learning 221<sup>TM</sup>** is the expression I have adopted to describe the disruptive changes in the education landscape as a result of the rapid developments in information, communication and allied technologies in the immediate past and continuing in the foreseeable future.

As we observe the global scene in the 2nd year of the 2nd decade of the 21st century and the ubiquitousness of computing, we can't but help thinking how education would change to respond to the new learning needs of the Society.

These conversations would be around such concerns. One set of people are more comfortable with these discussions being initiated on a regular basis through an e-mail in their inbox every Monday or every other Monday or the first or last Monday of the month. Some others feel that this should be entirely on Facebook, which is the place for conversations. Do let me have your opinion on this as well as on the threads you would prefer to

have in these conversations. This is not a newsletter on education, reporting to you all current educational events. That is for newspapers and television channels. This is about building a community interested in matters educational. And it will have learners, educators, parents, working people among us. With the emergence of life-long learning, the same person may be wearing more than one of these caps.

Some of the issues that I propose to be taking up in the forthcoming conversations would be:

- Attributes of an educated person in 2050?
- What is the role of the educator in creating such educated persons?
- 21st Century Giftedness in school children and adults;
- Awakening the Learner within?
- Overcoming Maths Phobia and enhancing Mathematical Competence.
- English language learning;
- Asking the right questions?
- Ideonomy: the Science of ideas;
- Enjoying being innovative and creative;
- Information Skills;
- What makes a good Educational App for hand-held learning?
- Dharma: The right thing to do: Insights from western and Eastern Philosophy;
- Learning Analytics: Measuring Quality in Massively large educational contexts.

The common philosophical thought in all these discussions would be how our perspectives on these matters change in the modern information society which is a post WTO, post Internet, post PC, Tablet and Smart phone world.

Earlier in history, the invention and development of language, writing and printing were critical information handling techniques, and each of these caused a revolution, major transition, paradigm shift in the overall structure of human society.

In the 2nd decade of the 21st century we are at a 'critical point' when the computing and allied technologies are causing a 'phase transition' in the future of education. A decade from now, the new teaching-learning eco-system may be almost not recognisable as having evolved from the past.

Just as a pre-cursor, for example, must teaching of Mathematics result in the ability to calculate by hand text-book problems that simplify the real world or should it be the ability to view the real world mathematically and if needed use software and computational tools?

Do write to me your views on how we should develop this community. You will see at the top icons for my website, e-mail, Facebook and other tools for interaction.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

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### For Learners

No matter what course you are pursuing and whatever your aspirations, the future is both very bright and very dark and gloomy. In some sense this was always so.



So how do you go from darkness to light, from failure to success, from diffidence to confidence, from unemployability to employability from a struggler to a prospering and flourishing performer.

The most important tool that is in your hand is to acquire the knowledge, skills, attitudes and beliefs that promote success. First read the Michael Lee's **7 common complaints of unsuccessful people** and promise to yourself that you will not indulge in them. Then note Stephen Covey's **7 habits of highly successful people**, and systematically plan to follow them. Remember:

**"Failing to plan is planning to fail".**

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### For Teachers



If you aspire to become a great teacher, yes a Rockstar Teacher, you will need to make efforts to improve not only on the understanding of the subject you teach (note Einstein's quote below) but also of the learners in your class. One thing is however certain. There is a whole lot of new technological skills and tools that have an important role in enhancing your effectiveness as a teacher. Learn about them and take the test to measure your readiness to be a 21st Century Teacher.

### For Parents



Every parent is concerned about the cognitive virtues that their children acquire during the learning stage. For this they send them to the best schools in their Geographies. But obviously Schools look at the whole group of children. Though the fact is that each child is unique. And only the parents are in a position to observe the special abilities and dispositions of a child. In particular, if the child is especially gifted in one of the different multiple intelligences that Howard Gardiner has drawn attention to. So do look up information on attributes and signals of Giftedness and if you do see them in your child, contact us to create suitable pathways for realisation of the full potential of your child.

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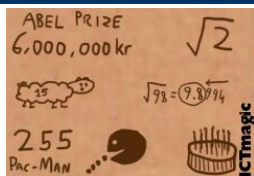
## For Knowledge Workers



Having found a foothold in the economy, you are always working on progression and development and in these times Continuing Education and acquisition of new knowledge and skills are the only means to progress. If your career is getting to a plateau, you may need to re-invent yourself. They say that these are times when one has to continuously learn, unlearn and re-learn, becoming a life-long learner. Because the skills acquired over a life-time can become obsolete in an instant, a systematic investment in your own learning is the best investment one can make. And like the general principle of good investing, invest

in a variety of skills and do some learning regularly and systematically. And learning with tablets and mobiles while on the move or whenever there are a few minutes to spare is a good way of keeping abreast. Note the quotation from Bill Gates about the best education coming from the web.

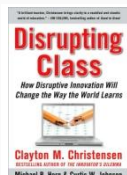
### App of the Week



I plan to bring to your notice an educational App every week. This is important as there are about half a million Apps available for mobiles and

Tablets and many of them are educational. In a later conversation I will share with you information on what makes a good educational App. But this week I suggest a look at **Numberphile** that is a very interesting App if you want to become friendly with numbers, in ways other than simply doing mathematical problems in class.

### Book of the Week



**Clayton M. Christensen** is a Harvard Professor, well known for his work on disruptive innovation. He was challenged by his academic colleagues to study where disruptions would happen in education. *Disrupting Class* is the result of that effort. This is a great reading for all involved with education. The interesting conclusion is that it is not so much the use of technology that is disruption in education, as the 'personalisation' of the learning experience. So, we have some idea of what the future holds.

**Teaching to a class of one student.**

### Video of the Week

There are a large number of free educational videos now available and their number is increasing by the minute. I suggest you look at this short video of **Thomas Suarez**, a 6th grader who has given a talk on TED about how he went about forming an App club because while other children were happy playing games, he wanted to create an App and had no help. Do watch this. You will love the kid.



### Free Course of the Week

There is a large repository of free courses that could benefit you. For those who respond within a month of the issue of this 'conversation', can register for a free 10 hour course on "**21st Century Learning Skills**" which is part of Learning 221.

From the clay tablet to papyrus, to printed books to the iPads has been a long journey in devices for holding content for learning. We have also moved from an information scarce world to a world in which information is being unleashed at an explosive rate and the challenge is to find relevant content that can be used to construct learning. The 21st century tools for learning are thus very different from those of the last century.

This short focussed program is useful for all who need to seek information for learning or even for research or professional purposes.

Investing time and effort in acquiring the skills imparted in this program is perhaps the best decision one can make in preparing oneself for flourishing and thriving in the 21st century.

To show your interest, just click on the e-mail icon at the top and provide information about yourself in a free format (Name, DoB, Qualifications, E-mail, Mobile no., City, State).

### Website of the Week



If you want to succeed, they say hitch your wagon to a star. So the website I suggest for you to visit [www.nobelprize.org](http://www.nobelprize.org)

It may come as a great surprise that ordinary people can benefit from the Nobel Prize Site, but it is a fountainhead of knowledge and resources including games to illustrate various findings for which Nobel prizes have been awarded. And for those parents who think Facebook and twitter are frivolous, well this site is connected to them. In fact if you have a worthwhile question you may get a Nobel laureate to respond to it.

### Quotes of the Week



***"In 5 years from now, the best education will come from the web."***

— Bill Gates, 6th August, 2010



***"If you can't explain it simply, you don't understand it well enough."***

—Albert Einstein

## Becoming a

# ROCKSTAR Teacher

**Equipped with 21st Century Teaching-Learning Technologies**

### About the Program

A Rockstar teacher uses 21st century ICT tools to create self-directed learners acting as agents of change, who will transform the world in several different spheres of activities. Their students are achievers, creators, thinkers and innovators, driven by passion and commitment, to make a difference.

### Duration and Delivery Model

Normal duration recommended is 6 months. That would be learning effort distributed uniformly over about 20 weeks corresponding to an academic semester. For more relaxed learning the course can be spread over one year. For highly motivated learners who can put in the required effort, it can be completed in 3 months. The course contents will be sent to each learner through about 20 e-mails.

### Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "rockstarteacher21@gmail.com".



**For any further Information, Contact:**

Prof. M.M. Pant

E-mail: [rockstarteacher21@gmail.com](mailto:rockstarteacher21@gmail.com)

Cell: +91 - 98100 73724;

Web: [www.mmpant.net](http://www.mmpant.net)

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0002  
9<sup>th</sup> July 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



Education is almost entirely driven by the Government. Education in India is primarily a State matter although there are several elements in the concurrent list. The Right to Education Act takes this further in prescribing free and compulsory Government provided schooling from ages 6 to 14.

It is interesting to note that historically, education in India was managed by the community and it was a job rather well done. We were the most prosperous country till about 250 years ago, and it is worth taking a look at Macaulay's statement on February 2, 1835 in the British Parliament:

"I have travelled the length and breadth of India and I did not meet a single person who was a thief. I have seen such affluence in that country, such competent individuals and such talent that I do not think we will be able to conquer that land so long as we do not break its cultural and ethical backbone. I therefore state that we change the ancient education system and culture of India because if the inhabitants of India begin to think that the ideas and thoughts of foreigners, of Englishmen, are better than and

superior to their own, then they will lose their culture and self-respect and they will become a dependent nation, which is what we need."

Mahatma Gandhi referred to this in his Chatham House speech in London on October 20th 1931, before a select audience said "I say without figures of mine being successfully challenged that India today is more illiterate than it was 50 or 100 years before, and so is Burma, because the British administrators when they came to India, instead of looking at things as they were, began to root them out. They scratched the soil and began to look at the root and left the root as it is and let the beautiful tree perish".

In modern times we are again at a situation when harnessing the cognitive surplus of the community would deal with the educational challenges of the country much more effectively than the low quality State apparatus. I had thought I would at a later date introduce the thought leader who had convinced me about the role of the community in the educational transformation. But the news of her death on June 12, 2012, has made me refer to her singular role in convincingly demonstrating that people can work together to do what neither the Government nor the private Corporates can. **'The tragedy of the commons'** is giving way to the **wisdom of the crowds** in the post Internet World. **Prof. Elinor Ostrom** was awarded the 2009 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, which she shared with Oliver E. Williamson, for "her analysis of economic governance, especially the commons". She was the first, and to date, the only woman to win the prize in this category. Her work was associated with the new institutional economics and the resurgence of political economy.

The link here connects you to the obituary article on **Prof. Elinor Ostrom** in the Economist, and of course there is a whole lot of information on her accessible from the Internet.

I do hope that in the coming years we will be able to demonstrate her theory by applying it to community based learning. The theoretical framework for the Higgs Boson was published in 1964 and today we have some evidence of it. The positron was predicted by P.A.M. Dirac in May 1931, purely on theoretical grounds and discovered

experimentally in September 1932 by Carl Anderson and today Positron Emission Tomography is a common medical diagnostic procedure.

Maybe in a decade the Nobel Prize winning ideas of Prof. Elinor Ostrom, technologically empowered with teachers and learners having Tablets and Smartphones connected on high bandwidth networks result in a community led education that serves the good of the community. May be Aurobindo's exhortation of 'Arise, awake and stop not till the goal is reached' is what we have to follow.

Do write to me your views on how we should develop this community. You will see at the top icons for my website, e-mail, Facebook and other tools for interaction.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

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### For Learners

With the increasing emphasis on employability and capability, there is the need for students to learn how to create knowledge, as they will find it in the real world. This will involve collaboration, consultation, teamwork and connectivism. Many educational opinion makers and thought leaders suggest that probably the most important lesson students should learn during their formal learning stage at School and higher education is mature, elective inter- dependence – social maturity with intellectual maturity. There is a growing awareness that collaborative learning in learning communities during their time in education will help students to improve their critical thinking and to learn to work effectively together, an attribute much valued in the real world with benefits to both their professional and personal lives. As Edwin Mason (1971) wrote:



"I cannot think of any part or moment of life in which we are not reacting to the presence of other people, or carrying over into relationship with everything else, what we have learned (by no means all of it consciously) from collaborating with other people while exploring the world with them."

This link to a Wikipedia article on 'learning communities' gives a basic idea and states that while such communities are in place in US and UK, it doesn't mention many other countries. We could have a head-start in India, with the huge range and diversity in our education system.

[http://en.wikipedia.org/wiki/Learning\\_community](http://en.wikipedia.org/wiki/Learning_community)

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### For Teachers



While I am suggesting extension and application of Elinor Ostrom's ideas to the world of learning, there have been suggestions that they can be easily extrapolated to the 'Digital Commons'. The article linked here is a rather good exposition of this.

A lot of learning is now digital and therefore many of the propositions of this article apply immediately to the digital learning space. But education and learning existed before the digital age and will probably continue after the digital age is over.

<http://www.forbes.com/2009/10/13/open-source-net-neutrality-elinor-ostrom-nobel-opinions-contributors-david-bollier.html>

Web based Open Education Resources movement is therefore bound to succeed, and all teachers should become active members of this movement.

[http://en.wikipedia.org/wiki/Open\\_educational\\_resources](http://en.wikipedia.org/wiki/Open_educational_resources)

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## For Parents

Most parents are interested in the welfare of their children and their future prosperity. In view of the great competition for very few opportunities for good school, University or Professional education, the emphasis is on high personal academic achievement and individual excellence. This is all very well, but in the future and to a large extent even today being a team player is becoming more important and valued. In the list of top 10 skills that Harvard and Princeton have enumerated as desirable in addition to the academic credentials, is the ability to work in a team. With computers and networks providing information processing and sharing tools rather easily, the human capability of being able to work with a diverse group of people across time zones and geographies to collectively solve problems or derive insights from large amounts of data are becoming critical to success.



Parents have to play an active role in letting their children meet and interact with diverse groups (of course ensuring that vulnerable children are protected from external threats of all kinds). Rather than denouncing or banning participation in social media created networks, they should facilitate these networks being leveraged to develop the new age 'social skills and etiquette' that will be expected of their children. An interesting product I learnt of which can be particularly useful to young children in this context is 'touchable earth', a tablet based world book for kids. A country's facts, culture and lifestyle are demonstrated by 9 to 10 year old kids inside that country. Kids describe their country, in their own words, to kids around the world Kids use full screen photos, video and text to engage in peer learning. 'touchable earth' is a unique resource with children presenting facts to children. They can then share opinions, mobilise ideas and nucleate world-wide movements.

## For Knowledge Workers



Although Ostrom has not written specifically about the Internet and online commons, her work clearly speaks to the ways that people can self-organize themselves to take care of resources that they care about. The power of digital commons can be seen in the runaway success of Linux and other open-source software. It is evident, too, in the explosive growth of Wikipedia, Craigslist (classified ads), Flickr (photo-sharing), the Internet Archive (historical Web artifacts) and Public.Resource.org (government information). Each commons acts as a conscientious steward of its collective wealth.

Thanks to a shared set of non-proprietary technical protocols that let different types of computers interoperate with each other, the Internet has become the largest, most robust commons in history. Anyone can form their own niche community to curate and share photos, music, videos, blog posts, research and much else.

<http://www.forbes.com/2009/10/13/open-source-net-neutrality-elinor-ostrom-nobel-opinions-contributors-david-bollier.html>

## App of the Week

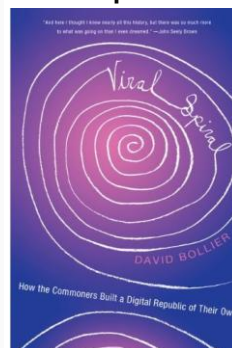
**"GoClass"** (<http://www.goclass.com>) is a teaching application for tablet devices that redefines the boundaries of computing in the classroom. Connect with your students like never before, customize and fine-tune your lesson plans on the fly, engage students in new ways and continuously evaluate their understanding while you are in class.



By enriching existing methodologies - rather than replacing them - GoClass empowers you to build on your teaching experience while engaging students in a 21st century learning environment. The exciting set of features in GoClass make it a great app for classroom teaching and learning!

## Book of the Week

**"Viral Spiral: How the Commoners Built a Digital Republic of Their Own"** is written by David Bollier. A stunning narrative history of the emergence of electronic "free culture," from open-source software and Creative Commons licenses to remixes and Web 2.0.



"A world organized around centralized control, strict intellectual property rights, and hierarchies of credentialed experts is under siege. A radically different order of society based on open access, decentralized creativity, collaborative intelligence, and cheap and easy sharing is ascendant." —from Viral Spiral.

## Video of the Week

The video suggested this week is about activism. Education is as much about behavioural change as it is about knowing facts and related cognitive skills. The community projects described here connect with people. Elan introduced us to a number of people who acted as educators, role models, mentors, and some became friends. It was also inspiring to see the dynamic range of programs that are already at work in the community.

Some had me wishing they were around when I was growing up. It was great to hear another side of the story than what we see from south hill, having the veil of 'Mythica' slowly lifted by different members of the community.

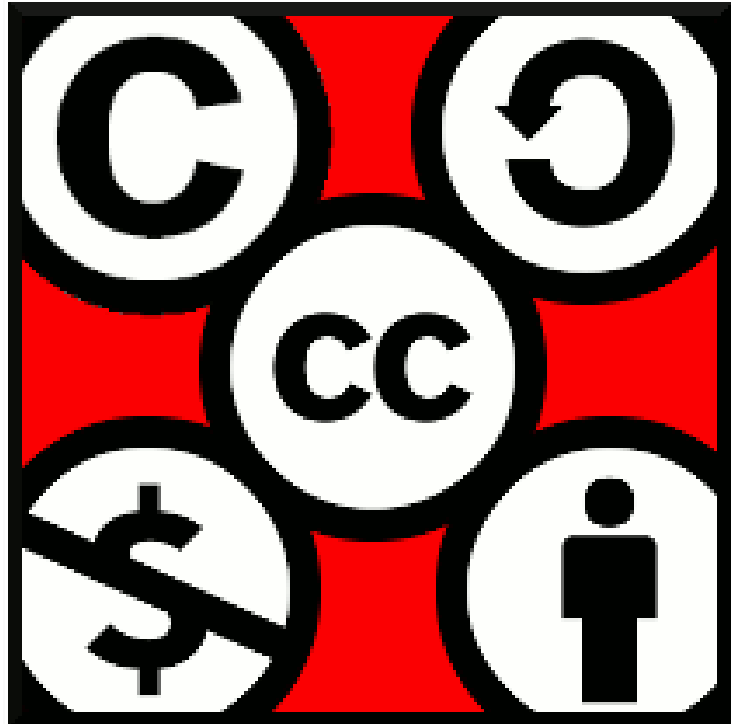
The Importance of Community Based Learning:  
[http://www.youtube.com/watch?v=HlrB6Wgy-FQ&feature=youtube\\_gdata\\_player](http://www.youtube.com/watch?v=HlrB6Wgy-FQ&feature=youtube_gdata_player)



## Free Course of the Week

Creative Commons helps you share your knowledge and creativity with the world. Creative Commons develops, supports, and stewards legal and technical infrastructure that maximizes digital creativity, sharing, and innovation.

<http://hollythelibrarian.com/2011/10/creative-commons-licenses-a-basic-course/>



## Website of the Week

Quora.com is a question-and-answer website created, edited and organized by its community of users. Like wikipedia, it is a splendid example of collaborative and co-operative learning managed by an net rested community. The site was founded in June 2009, and made available to the public on June 21, 2010.

Quora aggregates questions and answers to topics and allows users to collaborate on them by editing questions and suggesting edits to other users' answers.

Quora can be an inspiration for focused initiatives for K-12 or higher education or even niche areas like engineering, management, medical or legal education. The possibilities are limited only be the interests and commitment of the community creating it.

## Quotes of the Week



**"Bureaucrats sometimes do not have the correct information, while citizens and users of resources do"** — Elinor Ostrom

**"What we have ignored is what citizens can do and the importance of real involvement of the people involved — versus just having somebody in Washington ... make a rule."** — Elinor Ostrom

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

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16<sup>th</sup> July 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



If success happens when preparation meets opportunity, then for education to lead to success, we have to anticipate opportunities in the future and then design the educational experience to suitably prepare our products to benefit from them.

In the recent past we have seen this principle work for the IITs and IIMs and many other institutions that have developed a great brand. In the earlier times, there were well known Universities that prepared their graduates to become civil servants. Even well known schools acquire a reputation based on the qualities they instil in their learners. It was said that 'the battle of Waterloo was won on the playfields of Eton'.

We have also seen Nalanda, Takshila and Vikramshila disappear as equally ancient Universities like Oxford, Cambridge, Bologna and Paris continue to survive for almost a thousand years.

In this era of rapid change, it is important to gaze at the crystal ball, apply modelling and prediction techniques and develop insights to identify the

knowledge skills attitudes and values that all learners would need to have to succeed, prosper, flourish and thrive in the future.

Education is increasingly not so much about knowing the right answers to a set of questions, but more about continually questioning the answers. And therefore asking the right questions is the first and most important step.

I am listing below for immediate reflection, a list of 10 skills which Harvard University and 12 that Princeton University believe their graduates must possess in addition to the academic learning and course credits acquired by them.

### Harvard's list is as follows:

1. The ability to define problems without a guide.
2. The ability to ask hard questions which challenge prevailing assumptions.
3. The ability to quickly assimilate needed data from masses of irrelevant information.
4. The ability to work in teams without guidance.
5. The ability to work absolutely alone.
6. The ability to persuade others that your course is the right one.
7. The ability to conceptualize and reorganize information into new patterns.
8. The ability to discuss ideas with an eye toward application.
9. The ability to think inductively, deductively and dialectically.
10. The ability to attack problems heuristically.

### Princeton's list:

1. The ability to think, speak, and write clearly.
2. The ability to reason critically and systematically.
3. The ability to conceptualize and solve problems.
4. The ability to think independently.
5. The ability to take initiative and work independently.
6. The ability to work in cooperation with others and learn collaboratively.
7. The ability to judge what it means to understand something thoroughly.
8. The ability to distinguish the important from the trivial, the enduring from the ephemeral.
9. Familiarity with the different modes of thought (including quantitative, historical, scientific, and aesthetic).
10. Depth of knowledge in a particular field.
11. The ability to see connections among disciplines, ideas and cultures.
12. The ability to pursue life-long learning.

These should act as triggers to get you thinking to add your own. I do look forward to hearing from you your own thoughts on these, as well as any views on the degree of importance of these. In a future conversation I would build on all the feedback and inputs from other sources to propose our own 'set of attributes and abilities of the well educated person in 2050'.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

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### For Learners

The one important insight for all learners is that there is a continuous and ever-increasing gap between what the formal accredited educational systems provide and the knowledge and competencies needed to flourish and thrive in the real world. It is also becoming clearer that higher order human qualities like empathy, compassion, ethics, integrity, grit and perseverance may be playing a greater role than access to and knowledge of apparently rare nuggets of information and skills.



### For Teachers

It is increasingly becoming important for teachers to realise that they are first dealing with learners, then with the subject matter of learning. In practice it is often the other way round. As teachers we see our role as teaching a 'topic' which is part of a discipline to a cohort of learners in our class.



Teaching is a creative activity in which an educator transforms an ignorant person into a knowledgeable person, through successive stages of unconscious incompetence, conscious incompetence, conscious competence to unconscious competence. And it is because of this essential role of educators that they will have a much greater role in the future intimation and Knowledge economy.



## For Parents

Good Parenting is about providing a stimulating environment to the children to develop on them the desired qualities for them to lead happy and fulfilled lives. In the book 'Mind in the Making' Ellen Gelinsky shares a list of **The 7 essential life skills ever child needs**:

1. Focus and Self-control
2. Seeing someone else's point of view
3. Communicating
4. Making Connections
5. Critical Thinking
6. Taking on challenges
7. Self-directed engaged learning



Parents can engage in a variety of activities to develop these.

## For Knowledge Workers



The lists from Harvard and Princeton supplemented with requirements from your own context, should be used by everyone to create a personal total development plan. This means training and preparation for professional development as well as leading a happy, fulfilling and purposeful life. Profits, passion and purpose as suggested by **Tony Hsieh** in his book '**Delivering Happiness**'.

## App of the Week

**Dropbox** ([www.dropbox.com](http://www.dropbox.com)) is a free service that lets you bring all your photos, docs, and videos anywhere. This means that any file you save to your Dropbox will automatically save to all your computers, phones and even the Dropbox website.

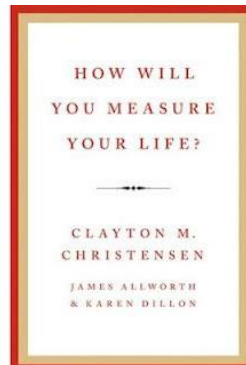


### Features:

- 2GB of Dropbox for free, with subscriptions up to 100GB available.
- Your files are always available from the secure Dropbox website.
- Dropbox works with Windows, Mac, Linux, iPad, iPhone, Android and BlackBerry.
- Works even when offline. You always have your files, whether or not you have a connection.
- Dropbox transfers just the parts of a file that change (not the whole thing).

## Book of the Week

Clayton M Christensen, James Allworth and Karen Dillon: '**How will you measure your life?**' An unexamined life is not worth living' said Socrates, and in this book, Prof. Christensen and his team suggest a framework based on rules of business success. The most important feature of this discourse is the emphasis on integrity, rather bluntly stated as '....stay out of jail?'.



### Video of the Week

Sir Ken Robinson on 'How Schools kill creativity?' makes an entertaining and profoundly moving case for creating an education system that nurtures (rather than undermines) creativity.

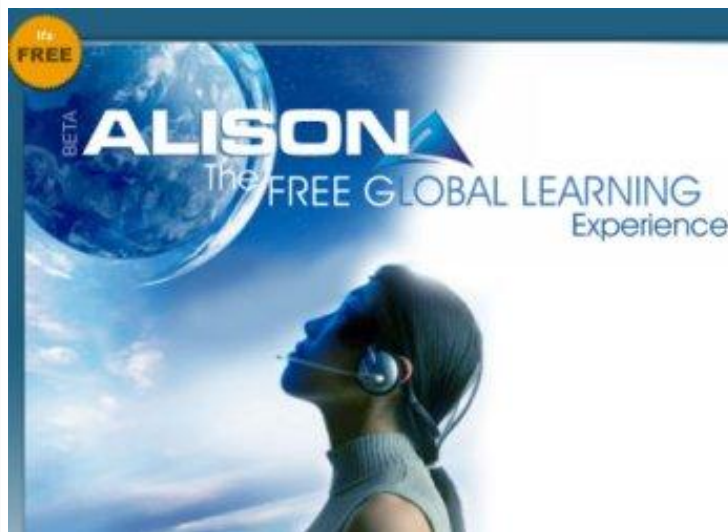
Creativity expert Sir Ken Robinson challenges the way we're educating our children. He champions a radical rethink of our school systems, to cultivate creativity and acknowledge multiple types of intelligence.

<http://newlearningonline.com/new-learning/chapter-2-life-in-schools/ken-robinson-on-how-schools-kill-creativity/>



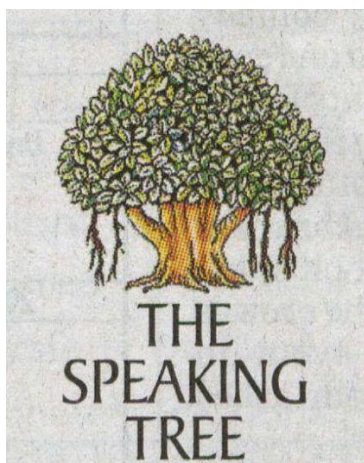
### Free Course of the Week

Instead of suggesting a single specific free online course, I am suggesting the site **www.alison.com** which has a collection of maybe more than 500 courses over a very diverse set of topics suitable for all the segments that we connect to in these conversations.



### Website of the Week

The Times Of India-Speaking Tree ([www.speakingtree.in](http://www.speakingtree.in)) is world's First Spiritual Networking site and a platform to seek answers, discuss and freely express views on spiritual matters.



### Quotes of the Week

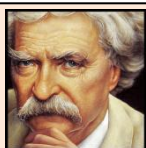


***"Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind. These passions, like great winds, have blown me hither and thither, in a wayward course, over a great ocean of anguish, reaching to the very verge of despair."*** — Bertrand Russell

<http://users.drew.edu/jlenz/br-prolog.html>



***"If a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest."*** — Ben Franklin



***"The two most important days in your life are the day you are born and the day you find out why."***

— Mark Twain

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0004  
23<sup>rd</sup> July 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



As it becomes clearer that we are moving towards a society where learning becomes critical and life-long learning is the norm, it becomes interesting to look at a few identifiable stages in the continuum of life-long learning. From the '**womb to the tomb**' or the '**cradle to the grave**'.

Our traditional Indian wisdom segments our life-span into 4 stages, **Brahmacharya, Grihastha, Vanaprastha** and **Sanyas**.

Shakespeare in 'As you like it' described 7 stages from infancy, childhood, the whining school boy, the youthful lover, the soldier (business manager in contemporary terms), justice, and finally the old person devoid of most faculties, sans teeth, sans eyes, sans taste, sans everything. The young prince Siddhartha was so traumatised by the sights and thoughts of old age that he left the comforts of the palace and became the 'enlightened one'.

A more detailed classification of the stages of life could be as **shishu, bala, kishore, yuva, vayask, praudh, vridhdha** etc. again probably 7 stages.

From a modern perspective taking account of longer life-spans, rapid growth in knowledge, obsolescence of erstwhile knowledge skills and the need to learn, un-learn and re-learn throughout the life, maybe we could look at the continuum of the journey of life-span learning as comprising the following stages, with approximate duration in years.

1. Pre-natal, neo-natal and pre-school learning: 5 years
2. Classes 1 to 5 of formal schooling: 5 years
3. Classes 6 to 8 of formal schooling: 3 years
4. Secondary School Classes 9 and 10 of formal schooling: 2 years
5. Senior Secondary Classes 11 and 12 of formal school: 2 years
6. Traditional University Degree: 3 years
7. Additional years in Professional education/ P.G. Degree: 2 years
8. First job opportunities, changes and adjustments: 5 years
9. Career progression period: 10 years
10. Settling down to a career/ lifestyle: 10 years
11. Peak responsibility levels: 10 years
12. First phase of post- retirement (retired but not tired): 10 years
13. The final years: 5 to 20 years

The focus of learning in all these stages is different, and apart from the changing attributes of the person, the external environment also changes very fast.



While our education system addresses only the preparation for the first half of life, that is responsibilities as a young adult, and a little bit of executive and continuing professional education, there is as pointed out by the well known psychologist Carl Jung, no 'college' that prepares for the second half of life.

A hundred years later, of Carl Jung suggesting the idea, we can see the possibilities for a 'Second Innings' in learning with mobiles, tablets and handhelds as access devices and over 40 year olds forming a learning community and harvesting fragments of time to build up and enhance their abilities and competencies.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

Now that learning is not only at the school stage, but is a life-long journey, the approach to learning must also change. The pursuit of learning has to go beyond surface and shallow learning to deeper learning and eventually to profound learning. Instead of 'just in case ' learning, there are now possibilities of 'just in time learning'. The core skill that has to be developed is that of 'learning to learn'. And once that is done, making a smooth transition through the different stages of life-long learning would be easy.



### For Teachers



For teachers the important message is that they have to inculcate in their learners an intrinsic interest in learning, and in learning to learn. Also as we prepare these learners to become active players as global citizens, we must imbibe in them a world-view that is different from the past country-centric perspective. From striving for fierce independence we have to move to fruitful inter-dependence and a collaborative and co-operative mindset.

### For Parents

While parents have an important supporting role at all stages of their children's education, it is most important in the first few years. Research has shown that pre-natal learning does happen, and there is some substance in the Abhimanyu story. Children develop quickly in the early years and a child's experiences between birth and age five have a major impact on their future life chances. A secure, safe and happy childhood is important in its own right. Good parenting and high quality early learning together provide the foundation children need to make the most of their abilities and talents as they grow up.



The Early Years Foundation Stage (EYFS) in UK sets the standards to ensure that children learn and develop well and are kept healthy and safe. It promotes teaching and learning to ensure children's 'school readiness' and gives children the broad range of knowledge and skills that provide the right foundation for good future progress through school and life.

We may add our own thinking and experience to the above to have a good understanding of a sound preparation for the pre-school child.

### For Knowledge Workers

Carl Jung pointed out the problems that occur when people enter the second half of life without adequate preparation, thinking that the learning and attitudes of the first half will continue to work. In his words "But we cannot live the afternoon of life according to the programme of life's morning- for what was great in the morning will be little at evening, and what in the morning was true will at evening have become a lie".

The second half of life presents a rich possibility for spiritual enlargement, for we are never going to have greater powers of choice, never have more lessons of history from which to learn, and never possess more emotional resilience, more insight into what works for us and what does not, or a deeper, sometimes more desperate, conviction of the importance of getting our life back.



Turbulent emotional shifts can take place anywhere between the age of thirty-five and seventy when we question the choices we've made, realize our limitations, and feel stuck—commonly known as the "midlife crisis."

Is it a good idea to develop an Academy for the second half of life by whatever name called? What learning issues would it address and what pedagogical model should it adopt? Do think.

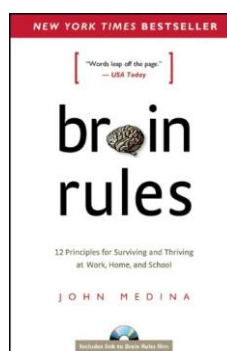
### App of the Week

**Discovr Apps:** For searching documents, websites and even videos and many other things, the default tool for most people is Google. But if you were looking for an app, there was no such tool. Now we have an answer to that, and it is an App. It is not free though, but priced modestly, it is worth the savings in effort and time when you are looking for an App that is right for you in a collection of over half a million.



<http://itunes.apple.com/in/app/discovr-apps-discover-new/id440101665?mt=8&ls=1>

### Book of the Week



**Brain Rules:** This is a very interesting book about our amazing brain. From all the knowledge that we have about the brain, the author **John Medina** has extracted 12 aspects of how the brain works, and presented in a very understandable form. This information is immensely beneficial for all the 4 categories of knowledge seekers that we address our messages to: learners, teachers; parents and knowledge workers.

### Video of the Week

Bill Gates in TED talk on what makes a teacher great? This talk was given a few years ago, but is still very significant in touching upon the attributes of a great teacher.

[http://www.ted.com/talks/bill\\_gates\\_unplugged.html](http://www.ted.com/talks/bill_gates_unplugged.html)



### Educational Games: Untapped Potential for Learning

Serious games are making the news almost every day. From teaching children about the cancer in their bodies to helping college students reinforce lessons from their business classes, these educational games take playing to a whole new level. Take a look at these 50 sites for serious and educational games you can play. No matter what you may be studying in college, there is a good chance that these educational games can enhance your learning or help you teach others.

From practicing your business skills to learning about book keeping in your courses at online colleges for accounting, these games will help you get a handle on your business school lessons. In addition to Business and Management, there is a vast range of games in the areas of: games for students, training games, health and medical games, humanitarian and environmental games, environmental games, political games and sites with multiple games such as the Nobel prize educational games site, thinking worlds, super smart games and filament games.

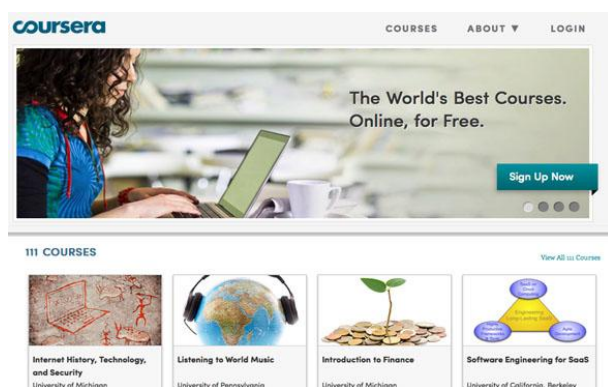
<http://www.onlinecolleges.net/2009/08/17/50-great-sites-for-serious-educational-games/>

## Website of the Week

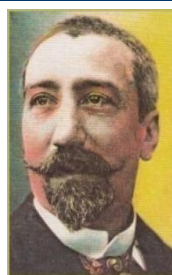
(not just one, but as many free courses as you want)

Although it has been around for a while, **Coursera** ([www.coursera.org](http://www.coursera.org)) was in the news last week for its strategic tie ups with a number of prestigious Institutions including Duke, Johns Hopkins and University of Edinburgh in Scotland, Coursera is now planning 100 or more courses starting this fall, in subjects as diverse as medicine, poetry and world history since 1300. Participation by EPF Lausanne, a technical university in Switzerland, means some of the courses will be held in French, opening a door to vast numbers of French speakers in Africa.

Together with initiatives such as Udemy, edX and the OER University supported by UNESCO and Commonwealth of Learning, we may be truly witnessing a disruptive transformation in College Education.



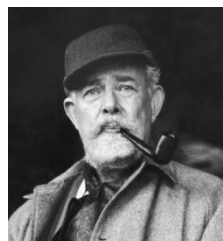
## Quotes of the Week



***"An education isn't how much you have committed to memory, or even how much you know. It's being able to differentiate between what you know and what you don't."***

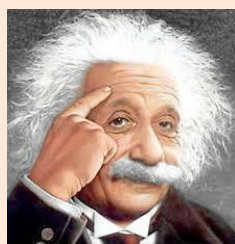
— Anatole France

***"The best thing for being sad," replied Merlin, beginning to puff and blow, "is to learn something. That's the only thing that never fails. You may grow old and trembling in your anatomies, you may lie awake at night listening to the disorder of your veins, you may miss your only love, you may see the world about you devastated by evil lunatics, or know your honour trampled in the sewers of baser minds. There is only one thing for it then — to learn. Learn why the world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting. Learning is the only thing for you. Look what a lot of things there are to learn."***



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— T.H. White, The Once and Future King



***"Teaching should be such that what is offered is perceived as a valuable gift and not as hard duty. Never regard study as duty but as the enviable opportunity to learn to know the liberating influence of beauty in the realm of the spirit for your own personal joy and to the profit of the community to which your later work belongs."***

—Albert Einstein

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



Issue: 0005  
30<sup>th</sup> July 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



Now that we have explored some thoughts, shared some information and seen that the future of education has to be driven by us, let us start developing a plan of action in which all of us can get involved. This can be a project on Development of an eco-system for Educational Apps.

It is clear that the use of Tablets, mobiles and handheld devices for all stages of education and training from pre-school through school, higher education, workforce training and life-long learning is increasing and will continuously grow exponentially, more so in the emerging economies and markets.

And while there are perhaps a few thousand educational Apps available, there is a need and potential for millions of new educational Apps and perhaps billions of them would be downloaded every day across the globe.

Learning through Apps would almost become like snacking. Estimates indicate that probably a billion bottles of Coca-Cola are sold (consumed)

every day. Educational Apps would be a several billion dollar opportunity in a few years. May be Yum Learning is round the corner.

We could work simultaneously on all the major platforms: iOS, Android, Windows8 as well as have a group working on HTML 5. If we see enough interest we may also have a group for Amazon Kindle Fire and one for Facebook Apps. After all the presence of the youth on Facebook is significant.

The Educational Apps Ecosystem would comprise the following activities (sub-systems):

- Curating and rating existing Educational Apps
- Endorsing Apps and Tablets for Learning: LearnTab<sup>TM</sup>, LearnPad<sup>TM</sup>
- Developing and putting in place a marketplace for Educational Apps
- initiating innovative methods for generating Educational Apps ideas
- Defining Rubrics and checklists for good educational Apps
- Evolving a framework and process for User Interface Design as well as the learning experience.
- Training Teachers in using Apps in the classroom as well as creating Apps (using tools such as Appinventor, that do not require knowledge of programming).
- Putting in place a network of professional developers for iOS, Android, Windows8 and HTML5.
- Implementing a testing and quality assurance team as well as continuous improvement based upon user feedback

Special Issue on  
**Educational  
Apps**

This project (The Educational Apps Eco-system) would establish India as the hub of educational Apps business, building on its strengths in IT and software services, and the huge dispersed pool of teaching talent whose cognitive surplus can be harnessed and efficiently managed as a network of competent professionals working with a cloud-based computing environment.

We have already done a fair amount of research on checklists and rubrics for what makes a good educational App. Since the ideas for Apps would be best generated by learners and teachers, we have also thought of an 'Educational Apps' ideas contest for learners, and a series of training workshops on 'Developing Educational Apps with Appinventor' for teachers, with no programming knowledge. The first of these is planned for September 21, 2012 in the Delhi/NCR region.

### What are the characteristic attributes of a good educational App?

The bottom line is that an effective app is one that does what you need it to do. And it's even better if it does it an inexpensive and engaging way. There probably isn't an app that would receive all checks on the following list, but in general, the more checks, the better the app is for education. We can build on the following list to develop our own checklist:

- Help or tutorial is available in the app
- Content is appropriate for the student
- Information is error-free, factually correct, and reliable
- Content can be exported, copied, or printed
- App's settings and/or content can be customized
- App promotes collaboration and idea sharing
- App provides useful feedback

We are at this stage open to individuals, organisations, both Indian and foreign, to join in this wonderful, exciting and almost unique opportunity to make an impact on the education model for the whole world.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

You're probably aware of Apple tag line 'there's an app for that' which it trade marked as well. If you're using mobiles and tablets in your engagement with friends (and of course not allowed to bring it to class or school for discipline reasons), quite often while you're being taught in class, you might be thinking 'Ma'am, there could an App for that'. You know what the App should do, but may not know how to create the App. Not to worry. Write up your idea in this template and mail it to us at [askprofpant@gmail.com](mailto:askprofpant@gmail.com). You may also use your own format to describe the App idea. Who knows, you may also earn some money if your idea is adopted for development and becomes a success.



<http://www.mmpant.net/EducationalAppsEcosystem/Template-for-Educational-App-idea-submission.pdf>

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### For Teachers



You're also invited to submit any ideas for educational Apps that strike you while you're preparing for your next class, during teaching in the class or while grading homework or just in your dreams. You may submit it in this template.

However there is another important role for you while you try out and explore existing educational Apps. Unless you hide under a rock, in the future you will be flooded with information on 'great' educational Apps. Please have a look at a scoring system (out of 100) suggested by us, help us improve it and apply it to rate any Apps that you have explored and help us share with others.

<http://www.mmpant.net/EducationalAppsEcosystem/Assessment-Guide-for-Educational-Apps.pdf>

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### For Parents

If you were in a dilemma, whether to let your children have a tablet or not, you may now stop sitting on the fence. Although these devices are less than 3 year olds, we are now talking about two eras:



before iPad and after iPad (BiPad and AiPad) much like we referred to B.C. (Before Christ) and A.D. (Anno Domini, the year of our lord, in Latin) in usual historical time-frames.

We have an interesting situation where tablets are ready for learning and learners are ready for tablets. However they can also be an extremely distractive device, especially for young wandering minds. And this can be developed as serendipitous learning to become more goal oriented with project based and active live learning. Your support and encouragement are very crucial, but will give you surprising and pleasant results. Do share your hesitation, trepidation or concerns and we will do our best to put you at ease.

## For Knowledge Workers

Many organisations employing knowledge workers have realised that their legacy systems are now being ignored and even laptops and notebooks, net books, ultra-books or sleek books are no match to the relentless adoption of tablets. Adoption of policies like BYOD (Bring your own device) are requiring new IT policies and roles of the IT Department.

But the big opportunity for all knowledge workers is the possibility of developing new ideas of Apps and take them to fruition either entirely DIY or being part of a larger Eco-system like ours. Please do read the article on DIY tools (<http://www.economist.com/node/21559366>) for building your own Apps and the success stories in the recent issue of the Economist.



### App of the Week

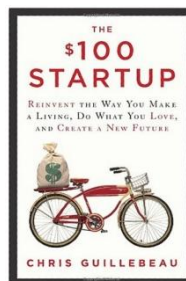


One App which runs on the iOS (I am not sure if it is also available for the Android yet, though the founder San Kim says they're ready to build it, when the market is there, a sort of chicka and egg situation) and is useful for all

our reader groups is the **ShowMe** app. Teachers can use it to quickly build content to share with students. Students can use it showcase their findings and research as well as opines and parents could start using it as easily. Please do explore the many things that you could use this app for.

<http://itunes.apple.com/in/app/showme-interactive-whiteboard/id445066279?mt=8>

### Book of the Week

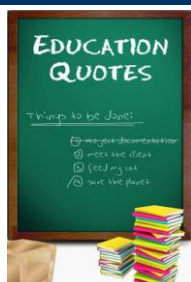


**"The \$100 Startup"** by **Chris Guillebeau** has a very attractive title and a proposition, that is given in the sub-title "Fire your boss, do what you love and work better and live more".

Don't really believe that you can get started for \$100, because I paid £12.99 for the book itself, which is like 20% of the proposed budget.

But the principles given their supplemented with some common sense, do allow anyone who has good communication skills to set out on the path of becoming an independent edupreneur. And if educational App development can be an area of your entrepreneurial interest, then jump on the bandwagon even if you can somehow put up an investment of about Rs 5 lakhs, to be a bit realistic.

### Quotes of the Week



Since this issue is focussed on Educational Apps, we refer you to an App in this quotes section. Lots of education quotes are available in this app which inspires and shows the way for leading life. Various features like share on Facebook, tweet on twitter, send SMS to your friends and even email quotes to your

friends.

<https://play.google.com/store/apps/details?id=com.technosoft.EducationalQuotes&hl=en>

### App Development Tools



We have mentioned in the lead article of this issue about **AppInventor** from MIT which is a free App development tool and its potential for use by teachers for creating educational Apps. The latest issue of the Economist has an article on

this DIY approach for creating Apps (<http://www.economist.com/node/21559366>) and mentions several such tools such as GameSalad, Conduit, AppMakr and Magmito in addition to Appinventor. Please do explore those which fascinate you.

<http://www.appinventor.mit.edu>



## Website of the Week

**APPitic** ([www.appitic.com](http://www.appitic.com)) is a website that is a compilation of almost 2000 educational apps.

APPitic is a directory of apps for education by Apple Distinguished Educators (ADEs) to help you transform teaching and learning. These apps have been tested in a variety of different grade levels, instructional strategies and classroom settings.

Do explore this site and peruse the variety of information available. Many sites use the popularity of an App to rank it. This may not be pedagogically sound. Our effort is to build a system of ratings by actual practitioners and users. Because in the huge number of ostensibly 'educational' apps it is not easy to choose suitable ones. Hopefully our Educational Apps Eco-system will help facilitate learners, teachers and parents to save their time and money with the help of our collective suggestions and recommendations.



## Video of the Week

This week's recommended video is a conversation about what makes a good mobile educational App? And the suggestions are very important. You may not agree with all of them, because contexts and learner profiles may differ. Remember the technology is only a means to facilitate and enhance learning. But an interesting insight is not to try to make video lectures of IIT Professors and have them available as Apps. Those are unlikely to be helpful, except in very rare cases. But look more at small aids to learning and quick tools for assessment measuring progress in learning in small steps. Perhaps Apps designed around a single point focused learning outcome may emerge as winners. But the question is still looking for answers. Maybe you have one. Do let us know.

<http://www.youtube.com/watch?v=8nS3GJjPE1Q>



***"Teachers don't just teach; they can be vital personalities who help young people to mature, to understand the world, and to understand themselves. A good education consists of much more than useful facts and marketable skills."***

— Charles Platt

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## Conversations with Prof. M.M. Pant on 'Matters Educational'



One of the recurring themes of my contemplation and reflection on matters educational is **'What will be the attributes of an educated person in the future?'** And towards this I had shared the views of leading academic Institutions such as Harvard and Princeton. I have also been reading the views of great visionaries and thought leaders.

I am working on creating a list of such indicators, but have converged on the following 3 as the most important:

1. The speed with which a person can learn something completely new, with or without the help of a guide or a teacher. This implies a level of meta-cognition that helps in his being able to differentiate between what he can learn by himself and where he needs to be guided or taught.

2. The speed with which he can give up undesirable habits and develop desirable habits, such as time management, overcoming procrastination, eye for detail, accuracy in spelling and numbers, deferred

gratification, and other cognitive virtues.

3. The agility and flexibility to adopt newer worldviews and mindsets, oriented towards growth and welcoming change and thriving in chaos and uncertainty, rather than a conservative and status quo ante mindset.

And all these 3 become manifest in the context of acquiring mathematical competences that are so important today and in this issue we will devote special attention to **Overcoming Maths Phobia** as an illustration of the points made before. Just as the importance of Mathematical Skills in the present and future is undoubted, there is almost universal agreement that it is Maths which is the most challenging subject learnt at the School stage.

From Maths anxiety, maths avoidance, maths phobia and discalculia, there is a range of responses to Maths teaching at the School level. In many cases it is the maths teachers themselves that are responsible for this.

As a child progresses in his learning of Maths, he moves on from integers, whole numbers to negative numbers, to fractions and decimals and conceptually difficult steps, and has to largely fend for himself with no help from the teachers or parents in progressing in this journey.

Imagine a child who is completely at par in his Maths learning till Class 5 like most other children, and then starts slipping a bit to a level where he knows about half of what he should know every year in the class. He is declared pass with 50%. And if he maintains this same level of 50% performance at classes 6,7,8,9 and 10, then after passing class 10, he would know 1/32 or about 3% of what he should have known. No wonder he is nowhere near being able to compete for higher education, no matter how much is spent on remedial coaching. Instead of 50%, even if he achieved 80% at each of the said classes, he would end up with a little less than 33% of what he should be knowing.

Special issue on  
**Overcoming  
Maths Phobia**

One could give more illustrations, but the point that quickly comes through is that there is no option but to master maths at each stage through the years at School, if one is to be adequately equipped.

Most efforts at improving Maths learning, tend to work on intense focused memorization to deal with imminent tests, repeating the same pedagogical approach that failed in class. Hence results are unreliable, and the few examples of success are used to justify the model. Global Learning Systems, such as Kumon have been built on this model of regular practice with 'little and often' and have their adopters as well as critics. More recently the Khan Academy has received a lot of attention because of the interest that Bill Gates and Google have taken in it.

But there is more to Math learning than Kumon, Khan Academy or hundreds of other web-based tutorial services. And this is about transforming a reluctant and passive learner to an enthusiastic, motivated and active learner.

A wide range of cognitive abilities are necessary to successfully learn, so the learner moves up the levels from '**Overcoming Maths Phobia**', to '**I love learning Maths**', to '**Fascinating Maths**' onwards to '**Mastering Maths**'. While a learner progresses through these stages, at the earlier stage, the emphasis is more on the psychological and behavioural dimensions, and in the later stages there is more emphasis on removing the blocks to maths learning and clearing misconceptions.

Maths is both fascinating or frustrating depending upon whom you speak to. We have designed a program that takes the learner beyond mastering the methods and tools that form the subject matter of School Mathematics, to an appreciation of the soul of Mathematics and the inherent creative spirit, almost like poetry.

In another quite unusual approach, this program will not be so much about the learner getting to learn, what the authors, creators and designers of the program know. It is about what else is worth knowing/ what is worth pursuing in the quest for Mathematical Knowledge?

The key message from this program is that Maths is just a tool of Philosophy (which is also applicable in daily life). It is a way to work with ideas, to develop them, to flesh them out, to understand them.

I look forward to your support in building this community. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

The emphasis so far has been on overcoming Maths Phobia and when this has been successfully done, the learner starts appreciating Mathematics in a way which is new and leads to a certain amount of fascination with Mathematics. An excitement about it, an understanding of things previously not understood or mis-understood.



The Fascinated with Maths stage then lead on to a desire to learn more Maths, maybe the real Maths and acquire and demonstrate proficiency in Mathematical skills.

From fascination springs love for learning and acquiring new skills and competencies. Not only the ability to do things that one was incapable of doing before, but also at a faster pace with less errors and more accuracy and correctness.

The state of a desire for learning Mathematics is one that naturally leads to success and achievement in terms of academic scores and better performance in all assessments including Board exams and IIT-JEE type competitive admission tests.

As the success in learning Maths becomes observable, the learner seeks higher goals, not being content with just a better performance than in the past. He now aspires to achieve Mastery Learning.



## For Teachers

Once the barriers to learning Maths such as Maths anxiety and Maths phobia have been overcome, the learner can address the conceptual and skill gaps in his knowledge of Maths.



The principles of Mastery Learning have been enunciated by John B Carroll in 1963 when he argued for the idea that the quantum of student learning is reflective of the learning rate.

Bloom followed the lead indicated by Carroll's research which had challenged the traditional view that "some students can learn and others cannot" by suggesting that the difference could be that some students were faster learners and some students were slower learners. This view at least gave some degree of hope for the vast majority who were not succeeding in school.

Carroll identified two factors that affected the learning rate of a student, perseverance of the student, and the opportunity to learn. The first is controlled by the student, that is, how much time they spend on learning, the former is the time allotted to learn by the classroom, or access to materials, etc.

Bloom concluded that given sufficient time and quality instruction, nearly all students could learn.

## For Parents

Many parents may not recognise or acknowledge this, but Maths phobia is often created by their negative experiences with Maths when they were students. There are many myths that are also prevalent as well as stereotypes especially about girls not being good in Maths. Please read to link on free course of the week on <http://www.mathacademy.com/pr/minitext/anxiety/>



## For Knowledge Workers

We often tend to think of School Level Mathematics as a useful subject only for Science or Engineering Education or careers in these and allied fields.

Consider the following list of certain aspects of mathematical thinking that are crucial in typical adult's everyday life:

- Understanding whole numbers, fractions, percentages and ratios = critical to time and money management, including everything from balancing an account to choosing mortgages, insurance, loans and making investments.
- Understanding Spatial relations- crucial for reading maps and finding your way about, even with the help that you may get from Google.
- Understanding functions- crucial for understanding energy costs, or for that matter even the blood sugar levels management for a diabetic, which varies with exercise, consumption of sweets and intake of insulin.



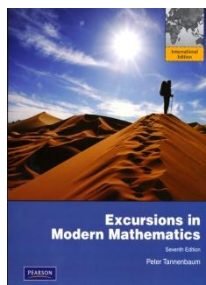
## App of the Week



**"Motion Math"** creates mobile math game suites that are rigorously educational, stylish, and awesomely fun. First suite is centered on number sense, the fundamental understanding of quantity, estimation, place value, and mental arithmetic. Math challenges in the safe, engaging context of our games can promote children's natural desire to learn and master new material. From a pedagogical perspective it incorporates kinesthetic learning in an unexpected areas like fractions.

<http://itunes.apple.com/us/app/motion-math/id392489333?mt=8>

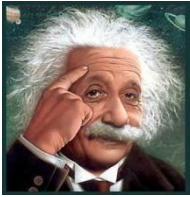
## Book of the Week



**Excursions in Modern Mathematics**, Seventh Edition, written by **Peter Tannenbaum**, shows readers that math is a lively, interesting, useful, and surprisingly rich subject. With a new chapter on financial math and an improved supplements package, this book helps students appreciate that math is more than just a set of classroom

theories: math can enrich the life of anyone who appreciates and knows how to use it. The very first chapter on the Mathematics of voting and elections is very interesting and a must read.

## Quotes of the Week



***"Do not worry about your difficulties in Mathematics, assure you that mine are greater."***

— Albert Einstein

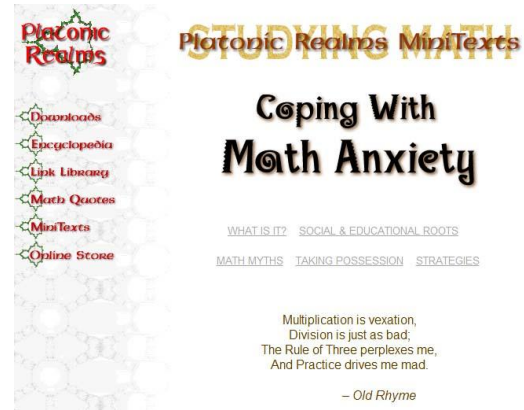


***"Measure what is measurable, and make measurable what is not."***

— Galileo Galilei

## Free Course of the Week

Many students are expressing is Math Anxiety, a feeling of intense frustration or helplessness about one's ability to do math. What they did not realize is that their feelings about math are common to all of us to some degree. Even the best mathematicians, are prone to anxiety – even about the very thing they do best and love most. See Einstein's quote.



<http://www.mathacademy.com/pr/minitext/anxiety/>

## Website of the Week

The **Khan Academy** (<http://www.khanacademy.org>) is an organization on a mission with the goal of changing education for the better by providing a free world-class education for anyone anywhere.

With over 3,300 videos on everything from arithmetic to physics, finance, and history and hundreds of skills to practice, we're on a mission to help you learn what you want, when you want, at your own pace.



<http://www.mathacademy.com/pr/minitext/anxiety/>

## Video of the Week

Mathematician and magician Arthur Benjamin combines his two passions in "**Mathemagics**," a mind-boggling presentation of lightning calculations and other feats of mathematical agility.

Mathemagician **Arthur Benjamin** races a team of calculators to figure out 3-digit squares, solves another massive mental equation and guesses a few birthdays. How does he do it? He'll tell you. With some practice, even you can do some magic with mathematics.



[http://www.ted.com/talks/arthur\\_benjamin\\_does\\_mathemagics.html](http://www.ted.com/talks/arthur_benjamin_does_mathemagics.html)

Brought to you by:



# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0007  
13<sup>th</sup> August 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



Today's "**Hindustan Times**" has a story of Sunil Kumar, a boy from Chandigarh who studied under a street light and qualified for admission to Punjab Engineering College. The same piece has an inset of the self-taught Mathematical genius Ramanujam.

I want to use these examples to draw attention to an intrinsic ability of being able to learn that is present in all of us. All children from all over the world are able to learn their first language in about 18 to 20 months, as well as many motor skills. The desire to learn is the most basic desire in all humans, is formed almost at and maybe even before birth and continues till we die.

The difficulty of our education methods is that we do not try to enhance or improve the self-learning abilities of our learners. If we do this they will be less handicapped in their learning. The formal name for this is autodidacticism, and all of us are autodidactic in various degrees. So "**awakening the learner within**" is the foremost duty of every parent and teacher.

In an article titled Autodidacticism and "unschooling" (Current education model is inefficient) By James Brewer, the author states that the traditional education model makes three dangerous assumptions:

- Thirty students can simultaneously maximize their learning potential when given identical material to learn;
- Students should learn because they are told to; and
- That the material being taught is important to the student's success.

He proposes that a combination of autodidacticism (self-teaching) and a radical philosophy called "unschooling" provides a possible escape from the dysfunctional institutes that are supposed to be educating us.

Unschooling, he explains is a system that promotes learning through everyday experiences. A trip to the grocery store becomes a lesson in math and business. Going to a zoo becomes a clinic on basic concepts of zoology and how to treat animals. All children have the opportunity to learn from these experiences; the problem is that the traditionally educated lose 40 hours of each week in school, making it more difficult to get out and visit places that could provide valuable learning opportunities. By rescuing children from the monotonous day-to-day idleness of traditional schools and allowing them to learn by following their own curiosities, we're doing them and ourselves a favor by affording them practical experiences they won't find in a school setting.

Special issue on  
**Self Directed  
Learning:  
Autodidacticism**



Computer games and Apps for handheld devices are very good examples of unschooling. With thousands of educational Apps available, they can teach almost everything from literacy, numeracy to history, Science and even Economics and business concepts such as free enterprise and trade through running virtual businesses.

But what experiences will teach differential equations, quantum chemistry, palaeopathology, or combinatorial optimization? Eventually, experiences won't be enough and you'll need to find other supplemental means of learning. This is where autodidactism and open education resources come in.

Autodidacts are people who teach themselves whatever grabs their interest. Imagine you were a child and you saw all of your friends riding bikes. You want to learn, but your parents are too busy to teach you. What do you do? You teach yourself. Congratulations, you are now an autodidact.

Autodidacts use whatever means are available to them to enhance their learning. They check out books from the library, they scour the Internet looking for relevant blog articles, they shake down their personal network to find knowledgeable individuals to talk to, and sometimes they just experiment to see what happens. Autodidacts and unschoolers learn what they want when they want. This requires discipline and dedication that most people don't have, but, if we pass along these attributes to our children from a young age, there is hope. Unschooling children requires more effort from the parents than traditional education does. This is considered to be a disadvantage by the same people who think traditional education is a good thing.

Parents should be willing and ready to make sure their children get the very best education possible, which certainly will not come from a reformatory where you must ask permission to go to the bathroom.

The good news is that self-directed learning (SDL) can be taught and everyone can become a more a self-directed person. It supports home-schooling, experiential education, open schooling and life-long learning. Keeping a journal, setting goals, planning and taking action are key tools. Self-improvement, personal development and the development of character are central themes of SDL.

In self-directed learning (SDL), the individual takes the initiative and the responsibility for what occurs. Individuals select, manage, and assess their own learning activities, which can be pursued at any time, in any place, through any means, at any age. In schools, teachers can work toward SDL a stage at a time. Teaching emphasizes SDL skills, processes, and systems rather than content coverage and tests. For the individual, SDL involves initiating personal challenge activities and developing the personal qualities to excel and succeed.

Many well known and accomplished persons across various fields and disciplines from across the world have acquired such knowledge and competence through active self-learning. A list of notable auto-didacts is here. ([http://en.wikipedia.org/wiki/List\\_of\\_notable\\_autodidacts](http://en.wikipedia.org/wiki/List_of_notable_autodidacts))

I look forward to your support in building this community. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

If like in the recent TV advertisements of KBC, your teacher says 'Your English is 3rd class', you can retort 'But Sir you don't know that I am an auto didact and will make it first class very soon'. Well how soon, depends upon your grit, determination and perseverance. You can do the same for Mathematics, Science, History, Economics or for Computing.

Just keenly pursue the path of becoming a better self-directed learner.

But note that this is not like watching the Olympics or cricket. Learning is not a spectator sport. You have to get active and begin to participate. Best of luck, and now you can go from being a back-bencher to being at the top of the class.



## For Teachers

Dronacharya was unkind to Ekalavya (probably because of ruler's pressure) but if you are a teacher today, you must support all learners who could benefit from your learning. So you must be able to transform your classroom lecture into a "Self-Access Learning Tool" so that all learners can do so at their convenience. Modern technology allows that to happen rather easily. The SALT (Self-Access Learning Tool) comprises the following: A video recording of the lecture, a text script of the lecture, a transformation of the lecture into a Self Instructional material format, formative assessment, summative assessment for mastery learning of this lecture and links to additional resources. All these resources may be integrated as a web-page, as an iBook or as an App.



The other thing that teachers could emphasise is the development of self-learning and measuring its progress.

## For Parents

Parents have a very important role in acknowledging and developing the self-learning abilities of their children. It's the earliest years that are most important in a child's cognitive development, and at this stage the parents must take a more pro-active interest. Merely enrolling a child in an air conditioned school with granite flooring does not help, and inculcating the habit of self-learning is critical. In the future, mediocrity will not be enough and the relentless pursuit of excellence is the norm expected from achievers and successful leaders.



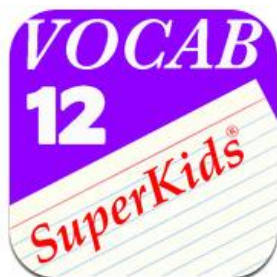
## For Knowledge Workers

Most Knowledge Workers would not be successful and retain their reputation if they were not good self-learners. But they can enhance their performance by systematically enhancing their self-learning abilities. Let us take a 'reading with comprehension' rate as an example. A proficient reader could read at about 1000 words per minute with a comprehension rate of say 80% and an ordinary reader could read at 200 words per minute with a comprehension rate of say 40%. The ratio of the abilities (to read with comprehension) is then about 10. This clearly demonstrates the single most important productivity factor for Knowledge workers. You may visit this site to evaluate your own reading with comprehension speed for free.



<http://www.readingsoft.com/quiz.html>.

### App of the Week



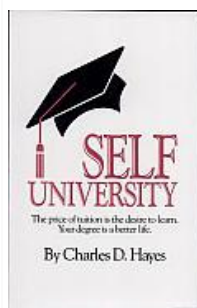
There are many Apps that help you on your journey of becoming a better self-learner. And we had said that the ability to read with comprehension is an important element of this skill. Fundamental to the ability to read, beyond knowledge of

the alphabets is an understanding of the words-the vocabulary. Here is a good example of a vocabulary building App for the iOS.

**Vocab 12 Super Kids**

<http://itunes.apple.com/us/app/12th-grade-vocabulary/id353946642?mt=8>

### Book of the Week



**Charles D. Hayes** is a self-taught philosopher and one of America's strongest advocates for lifelong learning. Promoting the idea that education should be thought of not as something you get but as something you take.

**'Self-University: The Price of Tuition is Desire. Your Degree is a Better Life.'** is a heart-warming book. It

encourages all of us to think of education as a life-long, self-initiated venture instead of a lifeless, institutionalized affair. This book is all about self-knowledge, and how it can be used as a tool to become a self-actualized person, find the right career field, and have a more fulfilling life.

## Quotes of the Week



**"Children have to be educated, but they have also to be left to educate themselves."**

— Ernest Dimnet



**"Self education is, I believe, the only kind of education there is."**

— Isaac Asimov

## Free Course of the Week

Many people wonder how they can learn something entirely by themselves. Well here is an interesting resource that explains how you could become a self-learner or an autodidact if that sounds more impressive.

<http://www.pickthebrain.com/blog/6-steps-to-effective-self-learning/>

## Website of the Week

### Wide Awake Minds

([www.wideawakeminds.com](http://www.wideawakeminds.com)): A resource for educators, self-educators, polymaths, and all who love to teach, read, think, and learn.

### Wide Awake Minds

A resource for educators, self-educators, polymaths, and all who love to teach, read, think, and learn.

Monday, March 19, 2012

#### Albert Jay Nock on teaching college students

Albert Jay Nock reflecting on his experience of teaching college students - a useful reminder for students to (a) have some purpose or intention behind the course of studies they choose, and (b) make the most of their educational opportunities:

"What struck me with peculiar force was that only one out of the whole batch was taking work with me because he wanted to learn something about my subject. Most of them were taking it as a filler. They sat where they did because they had to sit somewhere in order to meet some requirement in an intricate system of 'credits', and the most convenient place for them to sit happened to be in my lecture-room. Some were there for purposes connected with their prospective ways of getting a living. The majority,



#### About Wide Awake Minds

Wide Awake Minds is a resource for people who love to learn and teach. It celebrates the work of educators and self-educators, explores ideas about pedagogy and education policy, and promotes entrepreneurship in education as well as lifelong learning, serious reading, and the liberal arts.

## Video of the Week

Almost 20 years ago, the futurist Isaac Asimov had anticipated the potential of online learning to overcome the absence of teachers and support self-learning:



<http://mentormob.com/blog/2012/isaac-asimov-predicted-self-directed-learning-online/>

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



Issue: 0008  
20<sup>th</sup> August 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



I have been saying in my talks during the last couple of years, and I have it as a scrolling message on my website at [www.mmpant.net](http://www.mmpant.net) that "If you can only do what you have been taught how to do, you are replaceable with a piece of software and by a robot if it also involves sensing and motion".

Well today's Hindustan Times in its HT business section has a short report detailing how millions of low cost Chinese workers are being replaced by robots.

<http://www.hindustantimes.com/business-news/WorldEconomy/Workers-beware-Robots-are-all-set-to-take-over-your-jobs/Article1-916255.aspx>

So, creativity is the only way to maintain leadership. Providing low wage workers or call centre agents is not the way forward for economic

leadership in tomorrow's world.

This special edition focuses on creativity. This was an attribute earlier expected in a few Leonardos. We are moving towards 'everyday creativity' and 'creativity' as a lifestyle.

Creativity can be roughly defined as the ability to make or otherwise bring into existence something new, whether a new solution to a problem, a new method or device, or a new artistic object or form. A creative person is usually very intelligent in the ordinary sense of the term and can meet the problems of life as rationally as anyone else can, but often he refuses to let only the intellect rule. On the contrary, he relies very strongly on intuition. However, the converse is not always true. All intelligent people may not be creative. A distinction can be made between the convergent thinkers, the analytical reasoning measured by intelligence tests and divergent thinking which displays a richness of ideas and originality of thinking. It seems that a mix of both convergent thinking and divergent thinking is desirable in different degrees depending upon the tasks and problems under consideration.

Divergent (or creative) thinking has been defined as an activity that leads to new information or previously undiscovered solutions, rather than to a predetermined, correct solution (as in convergent thinking). The extreme case of convergent thinking is an algorithmic approach to problem solving, which is at the root of all computer programs and is the most mechanical approach to problem solving. Discovering a new algorithm could, however, be a creative exercise especially if it is in some ways better at solving the problem.

**Special issue  
on  
Creativity**

Many creative people enjoy and take a deep interest in apparent disorder, contradictions and imbalance. And from this apparent chaos and uncertainty they create organized bodies of knowledge often by observing patterns and relationships not seen by others. Several sixteenth century astronomers, before Kepler, have observed the movements of the planets. Kepler explained them, laying down the principles on which Newton later built. Newton defined the laws of gravity, which other scientists later refined. The empirical evidence for the 'theory of relativity' was available for fifty years before Einstein. Many laboring scientists had all the data, but it was Einstein's brain that made all the relevant right connections.

Those who like to analyse the process of creative thinking tend to organize this as comprising four progressive stages. In what may be described as the first stage **preparation**, the thinker assembles and explores the available information and data and perhaps makes some tentative preliminary decisions about their value in solving the problem at hand.

The next stage is called **incubation**, in which he mulls over possibilities and shifts from one to another relatively free of any rigid, rational or logical preconceptions and constraints. Incubation seems to be partly unconscious, proceeding without the individual's full awareness.

The next stage of **illumination** occurs when the pieces of information fall into place and a definite decision is reached about the result or solution. This is followed by the final stage of **verification**, refinement or polishing which is the process of making relatively rather minor modifications in committing ideas to final form. Although the four phases have been ordered in a logical sequence, in reality they may not be so well demarcated but may vary widely and proceed in different orders from one instance to another. Also the time spent at the various stages may vary. Sometimes the incubation stage, where different alternatives are being considered may last several years.

The scientist relies more on disciplined, logical thinking to lead him into new directions whereas the artist is more imaginative and expressive. However, not all scientific discoveries are conscious, logical and reasoned. Scientists and mathematicians can often be very creative when they are asleep or dreaming. Kekule, who proposed the cyclic structure for Benzene found it in a dream. Many mathematicians have dreamt of solutions to difficult problems and just wrote them down after waking up. Clearly their minds were seized of the problem and were constantly working on them. So it was probably not a dream in the usual sense, but a continuation of their thinking effort while asleep. That being mentally uninhibited can lead to creative experiences was stated by Einstein in a lecture that he delivered at Berlin in 1918 where he stated: "The supreme task of the Physicist is to arrive at universal elementary laws from which the cosmos can be built up by pure deduction. There is no logical path to these laws; only intuition, resting on sympathetic understanding of experience can reach them." Later he is reported as writing that these laws, the universal elementary laws from which the cosmos can be built are arrived at by "the free inventions of the mind" rather than by observation, experimentation or logical inference alone. However, these free inventions of the mind have to pass the rigorous test of reality and experimentation. But sometimes the expression can precede the observation, such as when Dirac predicted the positron long before it was experimentally discovered, or more recently the discovery of the Higgs boson.

However, the inventor, Thomas Edison, whose creativity resulted in the gramophone, the electric light bulb and the means to make motion pictures held the view that genius was only one- percent inspiration and the rest ninety-nine percent required perspiration.

I look forward to your support in building this community of creative people. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

So, next time you get a new idea or you think differently from the rest of the group do not be apologetic about it. Say what you feel, record it somewhere and at your own pace follow it through. Who knows, one day the world will accept those thoughts and you would feel rewarded.

“**Eureka!**” is the legendary exclamation made by Archimedes and hence the term, 'Eureka Act!' This is the process which has led to brilliant discoveries...”. Try to have as many Eureka moments as you can.



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### For Teachers

Clearly objective standards for evaluating the degree or extent of creativity are lacking and inter comparisons may not be easy. Even then a number of psychometricians have attempted to develop tests that measure creative abilities, involving such test items as unusual or multiple word associations, the composition of fable endings and the description of unusual uses or improvements for ordinary objects or implements. And while quantitative exactitude may not be possible, at least a qualitative framework can be available. In fact a relatively new branch called 'Fuzzy' mathematics has been developed to respond to the problem of bringing some precision to apparently qualitative parameters. And now we do have gadgets and devices such as washing machines, cameras, televisions based on fuzzy logic. So maybe creativity could also be measured although with some 'fuzziness'.



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### For Parents

Philosophers and researchers have been trying to find answers to the central question: whether the creative problem is solved by the conscious mind or by the unconscious mind and, therefore, whether we can actually be trained to be creative.

My own view is that we are intrinsically capable of creative and innovative activities and do them unrecorded throughout our lives. However, since society rewards compliant people, we tend to let our creative abilities fall into disuse.

But in the coming years there would be greater value to innovation and creativity and indeed they would become key ingredients for flourishing and thriving. While the 'Tit' may survive in terms of the Darwinian theory, to actually thrive and flourish one would have to be creative.



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### For Knowledge Workers

In the Intellectual Property regime of the future, people who are creators and authors of intellectual property would be the leaders.

Psychological experiments in the fields of motivation and learning have demonstrated that novelty is a great inducement to action. There is, it seems, a continuous and perennial tension in higher organisms between the establishment and maintenance of environmental constancies and the interruption of achieved equilibria in the pursuit of new possibilities of experience.

It would be desirable to foster creativity and while there may be a difference of opinion whether this can be done, definitely an attitude to appreciate creativity can be created and everyone can be stimulated to be at least a little more creative. And soon these attempts at creative thinking and expression would yield significant steps as well. And once such a spirit has been developed and the sparks ignited, creativity can continue till very late in life.





## Free Course of the Week

This program is designed to begin awakening your creativity and moving you forward into your creative potential. This course can become a catalyst to get you in a creative mindset.

Each day a new lesson is emailed to your inbox. The lessons are fast, easy to use, and will get you thinking, feeling, and awakening your creativity!

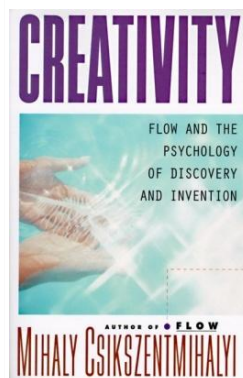
Science has proven it takes approximately 21 days for a new habit to develop. In the 21 days you will be charged to create new habits, thoughts, and feelings that will serve your creativity and allow for it to open you to great potential and possibilities.

Each email contains a lesson, an assignment, and a prompt. The prompts are designed to help you claim your creativity, believe in it, and assist you in developing a creative mindset.



<http://www.awakencreativity.com/21-days-to-awaken-your-creativity/>

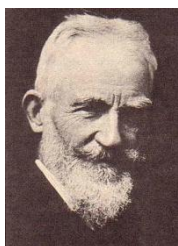
## Book of the Week



**"Creativity: Flow And The Psychology Of Discovery And Invention"** by **Mihaly Csikszentmihalyi** is about capturing those moments that make life worth living. The author's objective is to offer an understanding of what leads to these moments, be it the excitement of the artist at the easel or the scientist in the lab, so that knowledge can be used to enrich people's lives.

Drawing on 100 interviews with exceptional people, from biologists and physicists to politicians and business leaders, poets and artists, as well as his 30 years of research on the subject, Csikszentmihalyi uses his famous theory to explore the creative process. He discusses such ideas as why creative individuals are often seen as selfish and arrogant, and why the tortured genius is largely a myth. Most important, he clearly explains why creativity needs to be cultivated and is necessary for the future of our country, if not the world.

## Quotes of the Week



"You see things; and you say, 'Why?' But I dream things that never were; and I say, 'Why not?'"  
— George Bernard Shaw



"Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while."  
— Steve Jobs

## App of the Week



The **"Idea Generator"** app randomly combines three words together, allowing chance to foster ingenuity. Shake the phone or stroke the screen to produce concepts ready for your creative execution.

With the Idea Generator, the possibilities are endless. The application is fully customizable, so you can adapt it to work specifically for your own creative tasks.

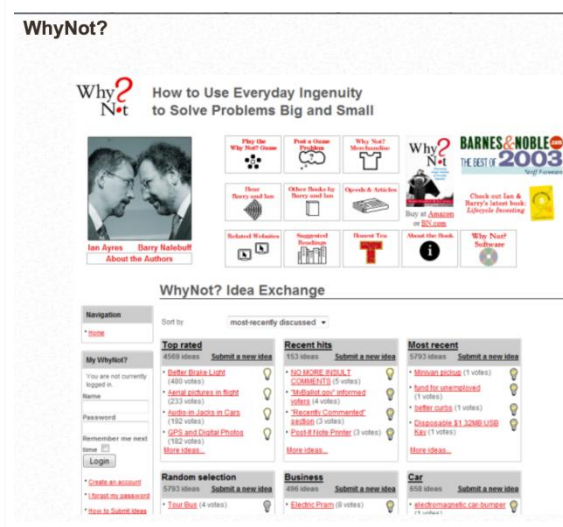
Of course, really creative ideas will come from you, triggered by these strings of words.

<http://itunes.apple.com/in/app/idea-generator/id293258418?mt=8&ls=1>

## Website of the Week

**"WhyNot?"** ([www.whynot.net](http://www.whynot.net)) is a website meant for the exchange of ideas. Users offer ideas that they have in all kinds of subjects, including businesses, cars, computers, phones, and even pets. Many of the ideas are as simple as an elevator deselect button and Ziploc chip bags, and a lot sound pretty strange but are really quite inventive, like microwaveable clothing and a bad breath monitor.

In any case, you'll surely find some great ideas that might inspire you enough to come up with your own and register to share them with others.



## Video of the Week

Very useful list created in this video. The one at number 2 is the most recommended by me. Always keep a notebook or sketchbook with you. You never know when an idea or "vision" will come to you and if you don't write it down or draw it out, it may not come back to you. Also, everyone needs a break and a little rest time for their mind to get that creativeness working again. Turn away from the iPad every so often and take a breather, then come back. May be take an occasional 5 minute walk.



<http://vimeo.com/24302498>

# 21st Century Teaching-learning Technologies

For educators seeking fluency in current information & communication technologies

### Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "techteacher221@gmail.com".

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



Issue: 0009  
27<sup>th</sup> August 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



Last week we talked about creativity and in the preceding week about autodidacticism and the ability to be a self-learner. And it was said that the motivation for self-learning comes from within. This time we will talk about a very special group that is extremely high on autodidacticism - gifted children/adults.

The concept of giftedness has always been defined in terms of intellectual capacity. It has always existed in our collective consciousness since historical times since every era has had its share of geniuses. But to be considered a genius is the end result of achievement often attained after a lifetime of work or even posthumously. The term giftedness is actually a term from psychology and it actually refers to a certain set of personality types. Like a constellation has a set of stars that give it its unique shape, similarly gifted children to have a set of personality traits that give them a unique shape. And this is deeply rooted in the biological architecture of the

individuals' mind and more specifically their nervous system. It's basically a particular type of nervous system that works differently or rather uniquely. And that is why gifted children behave and appear different from others and experience the world differently from others.

The simple yet hard to accept reality is that there are a far greater number of gifted people in the population than anybody realizes. The reason why we don't see them is because we look for the wrong things. The problem is that we tend to equate giftedness in children with savantism and prodigious genius. We equate it with a hyperbole and stunts of intelligence which may or may not be present. But that is the case with an obviously gifted child. The one who does math tables in his head at age three and has enough knowledge by age ten to be admitted to college. But the truth is that giftedness is often latent, like an isolated lake in the mountains, which is yet to start flowing with all its energy.

And another is the manifestation in which it is just so bursting to flow like the wind that it is often trapped in a chamber of camouflage. This type is often difficult to observe and it might be possible that the flow of creative energy is blocked by some psychological barrier and removal of that barrier can unleash that zealous passionate rage to master a subject.

But in either of the cases giftedness can be identified if one focuses not on academic or domain specific achievement (which is just one dimension of the whole system of giftedness) but rather on a qualitative assessment of personality traits and their manifestation. And an assessment that incorporates multiple natures and multiple talents while staying true to the core traits. The child/ adult may be gifted in music, art, science, math or anything else but intensity, sensitivity, perfectionism and over excitability are

**Special issue on  
21st Century  
Giftedness**



four major traits found in almost all gifted children in some degree or another.

All major developed countries and many which have risen recently - Korea, Taiwan, Israel particularly- all have had long running specialized programs and policies and in many cases entire schools focused on education of the gifted.

China started its first school devoted for education of the gifted and profoundly gifted (two entirely separate things) in 1978, which is almost 35 years ago. Korea has 10 such schools.

In India the identification process and the right philosophy and approach for gifted education has been lacking. And what we now have to do is politely accept two realities:

1. All children are equally gifted is a myth, and
2. Every child has a unique learning profile (much like a unique finger print) and a personalised, differentiated approach to every child's education is absolutely necessary for achievement of the full potential.

We have to start thinking of giftedness as it looks like in the 21st century and what needs to be done about it as society. 21st Century giftedness goes beyond the last century's and builds on imagination, information handling, leadership, ethical and spiritual matters in addition to creating new technologies or develop new path breaking or game changing ideas without explicit training or teaching.

I look forward to your support in fostering awareness, helping identify and support this community of gifted and talented people. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

Much of the traditional discourse was around Intelligence as indicated in Stanford-Binet type tests. But now Howard Gardiner has enunciated possibilities of 8.5 types of intelligences and researchers have indicated 3 to 8 types of learning styles. So look inwards and see what you seem to be like and talk to your parents, teachers and friends about your special abilities. Of course feel free to contact us, should you wish to share your thoughts.



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### For Teachers

After parents teachers are the ones who spend maximum time with children and are actually the ones who can see children in an atmosphere that allows for comparison and objective assessment. What they must look for is not just exceptional intelligence and marks but more importantly for personality traits and extreme interests in specific domains.



Intensity and sensitivity are defining characteristics of giftedness. They must also not discourage precocity or quest for higher order knowledge and curiosity. Complex challenges can be oxygen for the gifted mind.

They must especially keep an eye out for children who are bullied because the gifted can be bully magnets and those who are suffering from emotional problems and may be socially withdrawn. They must recommend such children for more extensive psycho-educational assessment.

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## For Parents

Parents have the single most important role to play in the development of gifted children. While this is true for all children the gifted child has specific needs different from those of the non-gifted population and parenting them requires a slightly different approach. Many eminent people who were gifted as children generally had a parent who identified, supported and nurtured their gift. And in this regard it is important to note that the signs of giftedness can be best seen by the parents. The key lies in simple everyday observations in behaviour that are often taken for granted.



## For Knowledge Workers

In this regard it is interesting to think that gifted people can be the intellectual and creative gold of any group of people- company, institute, society, political party, R&D lab etc. So just like the economic worth of a nation can be measured in terms of the amount of gold it has in its coffers similarly the intellectual worth of a nation or society can be measured in terms of its giftedness quotient- which can refer to total number of gifted people who have achieved creative flow and done domain bending work.



### Articles of the Week

**“Are we failing our geniuses”** is a question that has as much resonance in our country as it has in many others. The important thing this article mentions is about the educational experiment of The Davidson Academy which is a small residential school inside a university campus that caters to the profoundly gifted population and has a very unique model of education- let the autodidacts do their thing on their own.

Are We Failing Our Geniuses?

By JOHN CLONK Thursday, Aug 18, 2011

Log in with Facebook Sharing Facebook stories with friends is easier than ever. Add it!

Related

Stories

• Baby Einstein: Not So Smart After All

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Sustainable Style



PHOTO: PHOTOFEST  
Chloe Evans, 12, attends Reno's Davidson Academy.

<http://www.time.com/time/magazine/article/0,9171,1653653,00.html>

#### How to identify?

Types of gifted children:

<http://suite101.com/article/6-personality-types-of-gifted-children-a101380>

This is a good way of identifying adult giftedness. A comprehensive list of specific traits can be found here:

[http://www.gifteddevelopment.com/What\\_is\\_Gifted/characgt.htm](http://www.gifteddevelopment.com/What_is_Gifted/characgt.htm)

<http://suite101.com/article/identifying-gifted-and-talented-children-a99960>

#### Are you Gifted?

<http://www.santafecoach.com/gtest.htm>

<http://video.about.com/giftedkids/Signs-Your-Child-is-Gifted.htm>

#### Challenges of Giftedness

<http://www.santafecoach.com/gchallenges.htm>

### Book of the Week

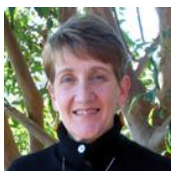


**“Gifted Children: Myths and Realities”** by **Ellen Winner**, in this fascinating book. Ellen Winner uncovers and explores nine myths about giftedness, and shows us what gifted children are really like. Using vivid case studies, Winner paints a complex picture of the gifted child. Here we meet David, a three-year-old who learned to read in two weeks; KyLee, a five-year-old who

mastered on his own all of the math concepts expected by the end of elementary school; and Nadia, an autistic and retarded “savant” who nevertheless could draw like a Renaissance master. Winner uses her research with these and several other extraordinary children, as well as the latest biological and psychological evidence, to debunk the many myths about academic, musical, and artistic giftedness.

Gifted Children also looks at the role played by schools in fostering exceptional abilities. Winner castigates schools for wasting resources on weak educational programs for the moderately gifted. Instead, she advocates elevating standards for all children, and focusing our resources for gifted education on those with extreme abilities—children who are left untouched by the kinds of minimal programs we have today.

## Quotes of the Week



***"It's a tough time to raise, teach or be a highly gifted child... Schools are to extraordinarily intelligent children what zoos are to cheetahs... Every organism has an internal drive to fulfill its biological design. The same is true for unusually bright children. From time to time the bars need be removed, the enclosures broadened. Zoo Chow, easy and cheap as it is, must give way, at least some of the time, to lively, challenging mental prey."***

— Stephanie Tolan



***"Gifted children have no greater obligation than any other children to be future leaders or world class geniuses. They should just be given a chance to be themselves, children who might like to classify their collections of baseball cards by the middle initials of the players, or who might like to spend endless afternoon hours in dreamy reading of novels, and to have an education that appreciates and serves these behaviours."***

— Jane Piirto

## Apps for Gifted Kids

When dealing with gifted children today it is more than books and encyclopedic resources that they need. They must have smart phones or tablets, usually on either Apple or Android operating systems. And whatever we want to do, "There's an app for that!" Here's a quick list of popular apps for gifted kids.

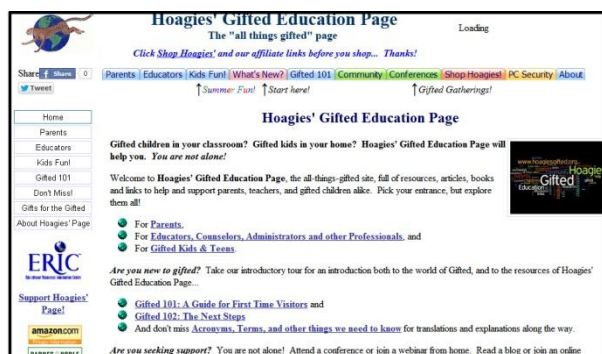


[http://www.hoagiesgifted.org/gifted\\_apps.htm](http://www.hoagiesgifted.org/gifted_apps.htm)

The apps are arranged by ages... pre-schoolers, young school-age kids, and older kids and teens. There are also apps for parents: apps for tracking your homeschooling efforts.

## Website of the Week

The "all things gifted" page is very very detailed and has something for all stake-holders. It has an immensely comprehensive amount of information on all aspects of giftedness.



<http://www.hoagiesgifted.org>

## Video of the Week

This video talks about how the achievement and IQ-centered approach to giftedness is what prevents many gifted children from getting what they seriously need- acknowledgement and nurturing which includes differentiated education. Please note that Sally's mother was the one who saw her daughter as being gifted.



<http://www.youtube.com/watch?v=axTEUY7g6-A>



## Acknowledgement:

I have had a great interest in Giftedness, but in our environment of supporting backwardness in general and the pursuit of minimality and mediocrity at best, rather than a relentless striving towards excellence, I had muffled my inner voice to help gifted children.

But sometime back, **Gaurang Khatri** (perhaps a gifted child himself), not quite fitting into the conformist world being thrust upon him, met me and rekindled my interest in nurturing Giftedness. I have seen in the IIT system several gifted children (their only sin being good in Maths and Science) who were pushed to tracks they would have rather not chosen. I have met young children with high degree of aptitude in creative digital story being brain washed that Economics is the thing to learn and girls who want to be dancers forced to prepare for the civil services exams. And imagine the woes of a bright boy who can get 100% in Mathematics but is passionate about becoming a dancer. Gaurang has not only given me a stimulus to pursue this cause, but has drawn up the entire contents for this newsletter. A very special thanks to **Gaurang Khatri**.



# Becoming an UberSmart Learner

Moving from a weak or poor student grade C to a high achiever grade A student

## About the Program

What do we really mean when we use the word “learn”? It is something we all do from the moment of birth, so most of us likely take this very complex process for granted.

How many of you have spent time trying to understand the meaning of learning, or how it occurs? Although many of us have a general sense of what it means to learn, there are often many assumptions involved.

## Duration and Delivery Model

Normal duration recommended is 6 months. That would be learning effort distributed uniformly over about 20 weeks corresponding to an academic semester. For more relaxed learning the course can be spread over one year. For highly motivated learners who can put in the required effort, it can be completed in 3 months. The course contents will be sent to each learner through about 20 e-mails.

## Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to “ubersmartlearner@gmail.com”.



For any further Information, Contact:

Prof. M.M. Pant

E-mail: [ubersmartlearner@gmail.com](mailto:ubersmartlearner@gmail.com)

Cell: +91 - 98100 73724;

Web: [www.mmpant.net](http://www.mmpant.net)

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0010

3<sup>rd</sup> September 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



We celebrate **Teachers Day** on the **5th September**, which falls during this week. So it would be apt to focus on Teachers this week in the main article, rather than in the usual section for teachers.

Such occasions are also for introspection. So I will begin with my own learning journey. My first teachers were my parents. My mother taught me the alphabets and language skills of reading, writing, listening and speaking in Hindi and English much before I went to school. The source for written words were mainly the newspaper headlines, which were not only in large size fonts, but carried messages that made sense. She also narrated many stories, which I later appreciated were character and values building: Raja Harishchandra, Dadhichi, Karna's Kavacha/kundala and so on. Good diction and pronunciation was built by making me recite slokas about Ganesha, Saraswati, Ram, Vishnu as well as the Hanuman

Chalisa. Of course developing memory skills was a by-product. And she wasn't formally educated.

My father took a keen interest in leading me to sources of knowledge ( books were aplenty in our house) but at a very early stage encouraged the use of dictionaries and encyclopaedias to find out for oneself. Today I can appreciate that I was being trained to be an auto-didact. He encouraged me to argue, debate, challenge assumptions, investigate, examine and experiment. He regularly followed up on what I learnt at school and even upto my Masters in Physics, although his formal degree was an MA in Economics and LL.B. I was fortunate to have some very good teachers at school, but my appetite for learning was really aroused by the teachers at the Government Intermediate College at Allahabad and later at the University of Allahabad. In contrast to the present noise about employability and career pathways, it was all about the pursuit of excellence. At School when one would get 99 out of 100 in Maths, the exhortation would be "99 is a good mark, but 100 would have been better". And at the University the role model were legendary students who when they saw the final exam question paper say "This paper has 8 questions; answer any 5", would respond by writing at the beginning in their answer books "Here are the answers to all the 8 questions. You may kindly choose any 5 for evaluation". No wonder Allahabad University many illustrious political leaders. Chief Justices of India, Cabinet Secretaries and other thought leaders.

There was a galaxy of teachers who influenced me greatly and it is not possible to list all. Equally it is not possible to not acknowledge BL Sharma (Maths), Rajendra Singh (Physics), Krishnaji (Physics), M.M. Joshi (Physics), S.K. Joshi (Physics). The combined influence of all these was to develop an enquiring, questioning creative mind with a passion for excellence. I later pursued my Ph.D. Research with Prof. S.K. Joshi when he moved to Roorkee and have been deeply moved by him.

Special issue  
on  
**Teacher's Day**

The single most important quality I learnt during my years with him was to be able to identify a new emerging area and explore and become significantly competent in it. This is what perhaps allowed me to pursue areas as diverse as ecology, geophysics, computer science, law, business and entrepreneurship, psychology and now in recent years education and philosophy. And I don't think that I am done yet.

While at Roorkee, I got an opportunity to visit the International Centre of Theoretical Physics where I got an opportunity to interact in flesh and blood with several Nobel Laureates in Physics. I actually talked about my work with Waller and Bethe and observed closely Abdus Salaam, a Nobel Laureate in the making. A large number of very distinguished Scientists from all over the world would spend time with younger budding Physicists. During the later part of my career as Post-doctoral fellow, Faculty, Lawyer and Entrepreneur I was influenced by many distinguished and accomplished colleagues. If I were to list all those who influenced me in a significant way, that number would be in the range of a hundred.

But the surprising element of learning is that one learns from almost any person one interacts with, if one is open to do so. I learned from my family, friends, clients, from my students, from both my children, and of course the wife( who hasn't?). Learning happens in discrete 'learning moments' which are of various kinds, and once one develops the hobby of learning, life is completely transformed and learning is pleasant and fun.

In a way this leads to the realisation of finding many teachers in the journey of life. I may even suggest that we are all learners and teachers through our life. And I think that it is this collective cognitive wisdom and spreading and sharing of ideas amongst various disciplines and systems that makes for the rich diverse world that we have today. Else we might well have been living in caves.

This led me to explore metaphors for learning and 'a great teacher'. One of the common ones which is stated by Sir Ken Robinson in the video of this week is that of a Gardener or a farmer. Perhaps that is why we use words like kindergarten and nursery for early school education. Though MIT has a project 'life-long kindergarten' which created products like Scratch for creative expression. Another metaphor is that of a sculptor and the book of this week is about the metaphor of teacher as sculptor. Some like to compare the teacher in a classroom setting to the conductor of an orchestra. So, what is your preferred metaphor? During my school years it was frankly that of a prison with a chief jailer and several cell superintendents. And since prisoners are rewarded for good behaviour and released earlier, I was able to get out of the 12 years school sentence in about 6 years through a series of double promotions which in fact is a metaphor for remission of sentence.

But I guess we all agree that the metaphor of a teacher should not be a factory worker, with bio-metric attendance systems to monitor attendance and CCTV cameras to record performance.

The reason why teachers are more important than ever before is that while experts can demonstrate their expertise and accomplish required tasks, it is only a teacher who can transform an ignorant person to an expert, taking the learner through the stages of unknown ignorance, known incompetence, known competence to unknown competence. And this is done by creating appropriate moments during this journey from ignorance to enlightenment: the aha moment, the eureka moment, pointing out to Sputnik moments along the way. Probably Buddha said 'when the learner is ready, the teacher will appear'. So a great teacher probably prepares the learner to be ever ready for learning, and then to re-quote for the nth time from 'The Alchemist', the entire Universe conspires to fulfill the curiosity of the learner and answer his questions.

I express my gratitude to all my teachers who have helped me become a life-long learner and enjoy the journey of seeking knowledge. And as Ken Robinson says in his video referred to here: 'It isn't over until it is actually over'.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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## For Learners

Most learners in formal education would be participating in events to celebrate Teachers Day. We appreciate the contributions of our teachers, long after the actual teaching events are over. But look for teachers all around you and get into the habit of learning. Learning is not a spectator sport happening when a teacher is performing in the class. But it is a participative activity in which your brain is involved during all your waking hours. Collaborative and peer learning will become even more important as a method of learning.



## For Parents

All parents with young children should explore the possibilities of their children learning to read from newspaper headlines and writings on posters, hoardings and advertisements. All children learn to speak their mother tongue by 18 to 20 months because of the immersion experience in the mother tongue that is created for the learner. Similarly creating an environment rich in written words around a child will help the child pick up reading skills, almost effortlessly. The same can of course be done with mobiles and Tablets, especially one like the iPad.

<http://www.scribd.com/doc/25142964/Tribute-to-Teachers>



## For Knowledge Workers

While you may feel that your formal education is over, in this age of shortened half life of knowledge and its rapid obsolescence of recently acquired knowledge, learning never stops. You could be learning from your colleagues, both senior and junior. Very often now, we can learn a lot from our children, if keep our minds open. Do read about Dattatreya's 24 Gurus (many of them quite unexpected, until you learn the reasons why)

<http://www.reikipath.org/miscellaneous-discussion/who-are-dattatreya-s-24-gurus~/>

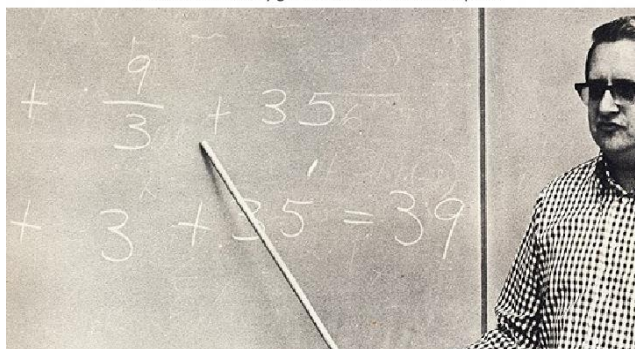


## Free Learning Resources of the Week

Teachers and teaching student and faculty generated views and metaphors. A good teacher always knows during the first lesson where she wants the majority of her students to be during the last lesson. Only geniuses will find their way alone.

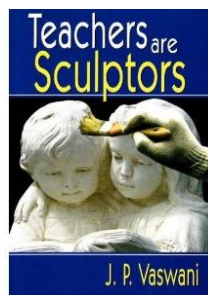
### Teachers and teaching

student and faculty generated views and metaphors



<http://slideshare.net/bcole/teachers-and-teaching-metaphors-presentation>

## Book of the Week

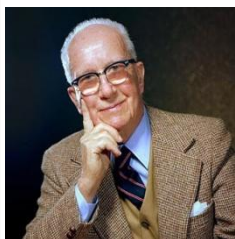


The world's noblest profession but the most undervalued, thankless profession is that of teachers. This book "**Teachers Are Sculptors**" written by **J.P. Vaswani** reveals new facets of the ideal teacher; a lamp-lighter, a sculptor, a builder, a moulder, and shaper of the Spirit, a gardener who cultivates character, a torch-bearer and a

transmitter of values and ideals, and above all - a friend! Turn the pages of this book and get a few glimpses of Dada's memorable portrait of an ideal teacher!

[http://books.google.co.in/books?id=h4MQ3lyqGmsC&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](http://books.google.co.in/books?id=h4MQ3lyqGmsC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)

## Quotes of the Week



***"If I ran a school, I'd give the average grade to the ones who gave me all the right answers, for being good parrots. I'd give the top grades to those who made a lot of mistakes and told me about them, and then told me what they learned from them."***

— R. Buckminster Fuller



***"I have come to believe that a great teacher is a great artist, and that there are as few as there are other great artists. Teaching might even be the greatest of the arts since the medium is the human mind and spirit."***

— John Steinbeck

## Website of the Week

It would be desirable for every Teacher to have a website with which to engage with its learners. Here is an example of such a website. Of course very soon social media and blogs and video tutorials would become a must for most such sites.

**Open Websites (OWS)** is a service provided to the College of Education faculty and supervised students for easily creating, publishing, and maintaining an online presence. This Website is intended to provide users with the ability to make websites that are available publicly. This means that all data uploaded to the service is always available to the public.



<http://ows.edb.utexas.edu>

## App of the Week

In an earlier issue we had mentioned Dropbox as a very useful App. A very useful App especially for teachers, and which can be an interesting metaphor for learner resources in the future is **Flipboard**. Flipboard is a social-network aggregation, magazine-format application software for Android and iOS.



# Flipboard

It collects the content of social media and other websites and presents it in magazine format and allows users to "flip" through their social-networking feeds and feeds from websites that have partnered with the company.

It is available for free from both the Apple and the Android App store.

## Video of the Week

**Sir Ken Robinson** talking about the cyclical nature of learning and how teachers nurture the learning process. Video is one of the most powerful tools for teaching and for learning. Because visual learning offers an alternative learning style that engages the user instantly and powerfully, allowing effective communication of complex information. Great teachers know what the conditions of growth and care are for their students' growth. Know your students so they can become the best they are.



[http://www.youtube.com/watch?v=aT\\_121H3kLY&feature=youtube\\_gdata\\_player](http://www.youtube.com/watch?v=aT_121H3kLY&feature=youtube_gdata_player)

A new feature that I am adding from this issue is to share a story. Most of them are well known stories worthy of being drawn attention to.

In this issue I want to share a story about education by Rabindranath Tagore. Tagore's contributions to education have been eclipsed by his fame as a writer. But in my opinion, he ought to be recognised as a great teacher. The link to the story is here:

[http://home.iitk.ac.in/~amman/soc748/tagore\\_parrot.pdf](http://home.iitk.ac.in/~amman/soc748/tagore_parrot.pdf).

But for the convenience of many readers, I am copying it right into the text of this document. Surely you will all appreciate this:

### **Excerpted from: V. Bhatia (ed.) 1994. Rabindranath Tagore: Pioneer in Education. New Delhi: Sahitya Chayan.**

#### **"The Parrot's Training"**

**Rabindranath Tagore**

Once upon a time there was a bird. It was ignorant. It sang all right, but never recited scriptures. It hopped pretty frequently, but lacked manners.

Said the Raja to himself: 'Ignorance is costly in the long run. For fools consume as much food as their betters, and yet give nothing in return.'

He called his nephews to his presence and told them that the bird must have a sound schooling.

The pundits were summoned, and at once went to the root of the matter. They decided that the ignorance of birds was due to their natural habit of living in poor nests. Therefore, according to the pundits, the first thing necessary for this bird's education was a suitable cage.

The pundits had their rewards and went home happy.

A golden cage was built with gorgeous decorations. Crowds came to see it from all parts of the world. 'Culture, captured and caged!' exclaimed some, in a rapture of ecstasy, and burst into tears. Others remarked: 'Even if culture be missed, the cage will remain, to the end, a substantial fact. How fortunate for the bird!'

The goldsmith filled his bag with money and lost no tune in sailing homewards.

The pundit sat down to educate the bird. With proper deliberation he took his pinch of snuff: as he said: 'Textbooks can never be too many for our purpose!'

The nephews brought together an enormous crowd of scribes. They copied from books, and copied from copies, till the manuscripts were piled up to an unreachable height. Men murmured in amazement. 'Oh, the tower of culture, egregiously high! The end of it lost in the clouds!'

The scribes, with light hearts, hurried home, their pockets heavily laden.

The nephews were furiously busy keeping the cage in proper trim. As their constant scrubbing and polishing went on, the people said with satisfaction: 'This is progress indeed!'

Men were employed in large numbers and supervisors were still more numerous. These, with their cousins of all different degrees of distance, built a palace for themselves and lived there happily ever after.

Whatever may be its other deficiencies, the world is never in want of fault-finders; and they went about saying that every creature remotely connected with the cage flourished beyond words, excepting only the bird.

When this remark reached the Raja's ears, he summoned his nephews before him and said: 'My dear nephews, what is this that we hear?'

The nephews said in answer: 'Sire, let the testimony of the goldsmiths and the pundits, the scribes and the supervisors be taken, if the truth is to be known. Food is scarce with the fault-finders, and that is why their tongues have gained in sharpness.'



The explanation was so luminously satisfactory that the Raja decorated each one of his nephews with his own rare jewels.

The Raja at length, being desirous of seeing with his own eyes how his Education Department busied itself with the little bird, made his appearance one day at the great Hall of Learning.

From the gate rose the sounds of conch-shells and gongs, horns, bugles and trumpets, cymbals, drums and kettledrums, tomtoms, tambourines, flutes, fifes, barrel-organs and bagpipes. The pundits began chanting mantras with their topmost voices, while the goldsmiths, scribes, supervisors, and their numberless cousins of all different degrees of distance, loudly raised a round of cheers.

The nephews smiled and said: 'Sire, what do you think of it all?'

The Raja said: 'It does seem so fearfully like a sound principle of Education!'

Mightily pleased, the Raja was about to remount his elephant, when the fault-finder, from behind some bush, cried out: 'Maharaja, have you seen the bird?'

'Indeed, I have not!' exclaimed the Raja. 'I completely forgot about the bird.'

Turning back, he asked the pundits about the method they followed in instructing the bird. It was shown to him. He was immensely impressed. The method was so stupendous that the bird looked ridiculously unimportant in comparison. The Raja was satisfied that there was no flaw in the arrangements. As for any complaint from the bird itself, that simply could not be expected. Its throat was so completely choked with the leaves from the books that it could neither whistle nor whisper. It sent a thrill through one's body to watch the process.

This time, while remounting his elephant, the Raja ordered his State ear-puller to give a thorough good pull at both the ears of the fault-finder.

The bird thus crawled on, duly and properly, to the safest verge of inanity. In fact, its progress was satisfactory in the extreme. Nevertheless, Nature occasionally triumphed over training, and when the morning light peeped into the bird's cage it sometimes fluttered its wings in a reprehensible manner. And, though it is hard to believe, it pitifully pecked at its bars with its feeble beak.

'What impertinence!' growled the kotwal.

The blacksmith, with his forge and hammer, took his place in the Raja's Department of Education. Oh, what resounding blows! The iron chain was soon completed, and the bird's wings were clipped.

The Raja's brothers-in-law looked black, and shook their heads, saying: 'These birds not only lack good sense, but also gratitude!'

With text-book in one hand and baton in the other, the pundits gave the poor bird what may fitly be called lessons!

The kotwal was honoured with a title for his watchfulness, and the blacksmith for his skill in forging chains.

The bird died.

Nobody had the least notion how long ago this had happened. The fault-finder was the first man to spread the rumour.

The Raja called his nephews and asked them, 'My dear nephews, what is this that we hear?'

The nephews said: 'Sire, the bird's education has been completed.'

'Does it hop?' the Raja enquired. 'Never!' said the nephews. 'Does it fly?'

'No.'

'Bring me the bird,' said the Raja.

The bird was brought to him, guarded by the kotwal and the sepoy and the sowar. The Raja poked its body with his finger. Only its inner stuffing of book-leaves rustled.

Outside the window, the murmur of the spring breeze amongst the newly budded asoka leaves made the April morning wistful.

# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0011

10<sup>th</sup> September 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



We had drawn attention to educational Apps in the 5th issue of this series dated 30th July 2012. And on Saturday 8th September, we organised what might perhaps be the first event of its kind in India, towards building a 'learning community' to initiate a pool of thousands of relevant educational Apps.

This event was focused on developing Apps for android with AppInventor, but that is not to discount other platforms and tools. The iPad is probably the best device for learning and its App store has thousands of excellent educational Apps. There is a lot of hope from Windows in the next 6 months. Reviewers say that Windows8 will try to move the focus from the app-centric paradigm developed by apple and emulated by android to the communication focus, and learning is all about communication and Windows8 may well lead the charge on community based collaborative and co-operative learning which may be the next quantum jump or tectonic

shift depending on whether you are more into Physics or Geophysics.

One gets from newspaper reports that perhaps the world's largest app fest for Windows8 is being held at Bangalore Sept 21-22. It's an opportunity to develop apps with global mentoring and technical resources at hand to drive the biggest digital innovation marathon in history and is open to the entire highly talented developer community in India and across the globe.

This coding Olympics for developers will be an 18 hour, non-stop software jam with the opportunity to design, build, test and submit apps with the help of special Microsoft mentors from all over the world and technical engineers on hand to support the process, a company statement said.

"To support developers in their journey from turning a dream into a download, onsite staff will be available to assist participants with preparing their apps for eventual submission to the Windows Store", the statement said.

**Special issue on  
Developing  
Educational Apps  
with AppInventor**

This is great. But focusing on Educational Apps Development will give any mobile OS the boost that no other domain can give. With Tablets having the potential to be used as learning access devices across the life-span and the current and emerging demographic profile of India, it is a multi-billion dollar opportunity. But focus has to shift from coders and developers to educators. The Battle of Waterloo was won on the play fields of Eton. The battle of mobile Apps has to follow a similar strategy.

Education is the 'superstructure', a term originating from Marxist discourses, but for now is the stuff that will get investors and capitalists to salivate. From small time investors who could invest in the development of an App of their choice with under Rs 5 lakhs or US\$ 10,000 to those wanting to monopolise the future teaching, learning and knowledge landscape with their initial investments of billions, this is the sweetest investment for all.

And isn't Amitabh Bachchan pronouncing through KBC in his baritone voice, that 'Gyan hi aapke kaam aata hai'. Another possible answer to 'Kaun Banega Crorepati?' maybe 'The one who invests in Educational Apps'.

Coming back to our own event, we had a very diverse cohort ranging from ages 17-65+, educational profiles ranging from Ph.D. In Physics, Computer Science and Mathematics, Masters in Psychology and English, B.Tech in Mechanical Engineering from IIT Kanpur, MBA from top Institutes to a student still pursuing his 'A' levels at London. Jawaharlal Nehru would have been mighty pleased to see this 'unity in diversity' in the pursuit of knowledge about Educational Apps.

This workshop is designed to be part of a properly designed course on educational Apps that goes beyond just the technical skills to investigating pertinent questions such as what makes a good educational App? This is very important because while there are about 500,000 Apps in the Apple store and about 600,000 in the Android the total number categorised as educational is around 20,000 and most of them are for toddlers or frivolous or trivial. Of course there are a few generic tools of great utility for education such as Flipboard. Dropbox and some for attendance or grade management. But we are looking for a time when the chapters of a text-book and all supporting materials will become an engaging 'wow' learning experience. The present iBook from Apple has this potential. The education community is waiting for similar or better stuff from Android or Windows8.

This write up was to share this development with the many who would be interested in educational Apps but could not be at this event because of operational constraints. But do contact us if this area of educational apps interests you.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

For young learners still at School, we are proposing a chain of 'Mobile Apps Clubs' which are hosted by a progressive School where children of not only their school but of neighbouring schools meet on say Saturdays for about 3 hours to share their experiences, learn from their peers as well as experts and engage in interesting and stimulating activities.



If you watch the video of the week, you will get many ideas about designing an Apps club. If you are interested in joining such a club do let us know.

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### For Teachers

Teachers have a central role to play in the educational Apps Eco-system. It begins with first annotating and tagging existing educational Apps against the rubrics and benchmarks for effective educational Apps, after first developing such standards.



Their next important role is to float ideas for new educational Apps. The third is to act as subject matter experts for accuracy and correctness. Many errors still persist even in text-books. Making error free Apps is a bigger challenge. The fourth is to develop some Apps themselves. And of course, finally the most important one is to integrate the use of Apps and handheld devices to create an engaging and engrossing learning environment.



## For Parents

George Weiss is 84, and he just may be the eldest mobile application inventor in America. His app is called “Dabble – The Fast Thinking Word Game”, and it is now available for iPhone, iPod touch and iPad.



The object of the \$0.99 game is to spell five words as quickly as possible using the 20 letters stacked in a pyramid shape. The five words must include a two, three, four, five and six letter word. The premise is simple and addictive. Dabble feels like the kind of old fashioned game you play with your grandparents — even grandparents reluctant to pick up an iPad.

<http://venturebeat.com/2011/08/17/84-year-old-becomes-eldest-app-inventor-with-a-word-game-called-dabble/>

## For Knowledge Workers

**The Oxford Happiness Index:** “Happiness” is a state difficult to define and achieve because of personal differences and mindsets. On the whole, certain parameters can be laid down to determine if a person is “happy” or not. You want to know what they are? Go to the link below and take Oxford’s test to determine whether you are happy or not:



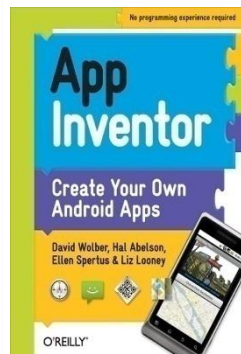
<http://www.meaningandhappiness.com/oxford-happiness-questionnaire/214/>

Another way of becoming happy with this Oxford Happiness Index is to attempt to make an App for it. Following the example of MakeQuiz and a bit of changes because of the (R) type questions in this Quiz, you could from the AppInventor tutorials be able to do so. If you really do it, do share with us by writing it up as a case study like the 12 projects described in the book on 'AppInventor'.

### Rubrics and Other Resources” for Educational Apps

- <http://sites.google.com/site/appinventor/course-in-a-box>
- <https://sites.google.com/site/appinventor/projects>
- <http://teacherswithapps.com/>
- <http://learninginhand.com/blog/ways-to-evaluate-educational-apps.html>
- <http://freeandroidappmaker.com>
- <http://developers.facebook.com/docs/mobile/android/build/>
- <http://www.topeducationalapps.com/>
- [http://www.readwriteweb.com/archives/13\\_tools\\_for\\_building\\_your\\_own\\_iphone\\_app.php](http://www.readwriteweb.com/archives/13_tools_for_building_your_own_iphone_app.php)
- <http://www.android3apps.com/photos-android-apps/>

### Book of the Week



This extraordinary book introduces **App Inventor for Android**, a powerful visual tool that lets anyone build apps for Android-based devices. Learn the basics of App Inventor with step-by-step instructions for more than a dozen fun projects, such as creating location-aware apps, data storage, and apps that include decision-making logic.

The second half of the book features an Inventor's manual to help you understand the fundamentals of app building and computer science. App Inventor makes an excellent textbook for beginners and experienced developers alike.

<http://downloads.ziddu.com/downloadfiles/18256591/OReilly-Android-App.Inventor.2011.pdf>

## Quotes of the Week



A high school teacher drew a dot on the blackboard and asked the class what it was. **"A chalk dot on the blackboard,"** was the only response. **"I'm surprised at you,"** the teacher said. **"I did this exercise with a group of kindergartners and they thought of fifty different things it could be: an owl's eye, a squashed bug, a cow's head. They had their imaginations in high gear."** As Picasso put it, **"Every child is an artist. The challenge is to remain an artist after you grow up."**

— Roger Van Oech

**"A voluntary activity or occupation executed within certain fixed limits of time and place, according to rules freely accepted but absolutely binding, having its aim in itself and accompanied by a feeling of tension, joy, and the consciousness that it is different from ordinary life."**

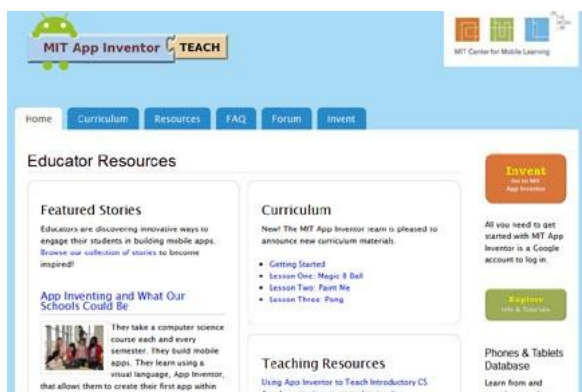


— Johan Huizinga, Definition of 'play' in "Homo Ludens", 1968

## Website of the Week

App Inventor for Android is an application originally provided by Google, and now maintained by the Massachusetts Institute of Technology (MIT).

It allows anyone, to create software applications for the Android operating system (OS). It uses a graphical interface, that allows users to drag-and-drop visual objects to create an application that can run on the Android system, which runs on many mobile devices.



[http://appinventor.mit.edu/teach/educators\\_frontend.html](http://appinventor.mit.edu/teach/educators_frontend.html)

## App of the Week



Two weeks ago, **Aarul Malaviya** who is pursuing his 'A' levels at CATS College, London had not heard of **AppInventor**, although he had played around with many Apps on his mobile phone and Tablet. When told about what AppInventor can do and being

given the links to the tutorial resources, he quickly adorned the role of an App creator in addition to his normal role of an App consumer. And having observed the challenges of the English language that many children who came to England for study face, he has created a quick and basic App on 'English essentials' that could become the first step to anyone wanting to continually improve his English, no matter which part of the world the learner is from.

On the 8th September Aarul presented his App and the excitement, thrill and hurdles in the journey to develop his first App, which was cheered by the audience (whose profile you may note from the lead article).

If you are interested in looking at the App, then send us an e-mail and we will send you a mail, with the needed information.

## Video of the Week

Elizabeth Soep from Youth Radio talks about how her students learn to become creators of technology platforms that distribute media stories.



<http://www.youtube.com/watch?v=pQjtvhRZRSA&sns=em>

## Story of the Week

This story has been contributed by Sri DC Pant. We thank him for sharing this.

### A Person Thrives only in the Presence of a Challenging Environment

The Japanese have always loved fresh fish. But the waters close to Japan have not held many fish for decades. So to feed the Japanese population, fishing boats got bigger and went farther than ever. The farther the fishermen went, the longer it took to bring in the fish.

If the return trip took more than a few days, the fish were not fresh. The Japanese did not like the taste. To solve this problem, fishing companies installed freezers on their boats. They would catch the fish and freeze them at sea. Freezers allowed the boats to go farther and stay longer. However, the Japanese could taste the difference between fresh and frozen and they did not like frozen fish. The frozen fish brought a lower price. So fishing companies installed fish tanks. They would catch the fish and stuff them in the tanks, fin to fin. After a little thrashing around, the fish stopped moving. They were tired and dull, but alive.

Unfortunately, the Japanese could still taste the difference. Because the fish did not move for days, they lost their fresh-fish taste. The Japanese preferred the lively taste of fresh fish, not sluggish fish. So how did Japanese fishing companies solve this problem? How do they get fresh-tasting fish to Japan? To keep the fish tasting fresh, the Japanese fishing companies (still) put the fish in the tanks. But now they add a small shark to each tank. The fish, in an attempt to run away from the shark, stay constantly alert and hence, fresh. The shark may eat a few fish, but most of the fish arrive in a very lively state.

#### Lessons from the Story:

- Like the Japanese fish - "A Person thrives, oddly enough, only in the presence of a challenging environment."
- Challenges are what keep us FRESH! Instead of avoiding challenges, jump into them. Beat the heck out of them.
- Enjoy the game. If your challenges are too large or too numerous, reorganize the challenge, team up, be resourceful and do not give up.
- Failing makes you tired.
- If you have met your goals, set some bigger goals. Once you meet your personal or family needs, move onto goals for your group, the society, even mankind.
- You HAVE the resources, skills and abilities to make a difference.
- Put a shark in your tank and see how far you can really go !!!



***"Storytellers have as profound a purpose as any who are charged to guide and transform human lives. I knew it as an ancient discipline and vocation to which everyone is called."***

— Nancy Mellon, The Art of Storytelling

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0012

17<sup>th</sup> September 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



In an earlier newsletter we discussed apps for education. Apps are one way to enhance a learning experience by making it high on learning effectiveness and engagement. From time immemorial great ways of learning have been – experience, sharing stories of these experiences, introspection, playing, tinkering, observing, experimenting and trial and error. This is why human species has also been described as Homo fabers – those who love to create and Homo ludens – those who love to play.

Imparting learning as disciplined, formal education is a fairly modern invention, only a few centuries old. While it may be efficient, it is often boring, or stressful, or irrelevant, or all of the above. This is because formal education has degenerated into passive consumption of knowledge and its later regurgitation in tests of recall. Whereas, research shows that deep learning happens when a learner is self-motivated to learn and constructs own understanding of knowledge.

This is what happens when we are playing a game. We are intrinsically motivated and overcome difficult challenges of our own volition. Games are high on effectiveness and engagement and they cultivate self-awareness, self-control, attention, effort, persistence, rule following, boundary negotiation, bonding, trust, empathy, respect, fairness and making right choices. But talk about using games in education and you have parents complaining how games are addictive and colossal time-wasters and educationists lamenting that games foster adverse social behaviour, at times resulting in outright violence.

Is there a way we can make the most from games to enhance a learning experience, while minimizing their downside? **Gamification** may hold the answer.

**Gamification** is use of game-elements in non-gaming contexts. Nike creating an online community where customers share their exercise data with friends and use friendly competitiveness to improve fitness; or, citizen science projects like [GalaxyZoo.org](http://GalaxyZoo.org) involving amateurs to help identify new planets and galaxies by analyzing massive amount of data; or, Volkswagen changing driver behaviour by rewarding drivers who drive within the speed limit through a lottery created by pooling fines imposed on drivers who violate the speed limit – are all examples of gamification.

Gamification of learning is not simply adding points, badges and leader boards as a layer on top of a learning activity. It involves deconstructing good games to find elements that can be used to enhance learning. According to designer



Sebastian Deterding, a good game connects with the personal goals and passions of the players and a great game lets the players customize the goals. Exactly what advocates of personalization of education are looking for?

Game designer **Raph Koster** observes in his book, '**A Theory of Fun**', "**With games, learning is the drug**". If this is indeed the case then why do students find learning taxing in a school environment? Deterding postulates that this is because in a school environment the conditions are not optimal because unlike a game the challenges provided are not novel or interesting (interesting challenges are contextual and learners identify with them because they are based on learners' aspirations, or life situation), there is no varying of pace in learning, scaffolding that allows gradual learning may not be present and learners at school do not get 'excessive positive feedback' which is informational in nature and not controlling or judgmental.

Game designer Amy Jo Kim explains that in a game a 'newbie' needs to be 'onboarded', a 'regular' needs fresh challenges so that new learned behaviours become a habit and an 'enthusiast' plays the game for achieving 'mastery'. One size does not fit all – an important lesson for formal education. Kim further propounds that good games embody the same five elements that are imperative for wellbeing and happiness, as suggested by father of positive psychology Martin Seligman – the PERMA elements: Positive Emotions, Engagement, Relationships, Meaning and Accomplishment. Elements that would surely go a long way in enriching a learning experience.

In his book '**Social Intelligence**' author Daniel Goleman explains the impact of emotions on learning and performance. He explains that our cognitive performance is highest at the right level of stress, and inspired moments of learning combine – full attention, enthusiastic interest and positive emotional intensity. Hans Selye too observed that an optimal amount of stress is important for improved performance. He described it as 'eustress' or euphoric stress, which is the opposite of distress. Psychologist Mihaly Csikszentmihalyi describes a similar mental state, which he calls 'flow', where one strikes optimal balance between skills possessed and challenge faced.

Game designers understand this optimal skill-challenge balance very well. That is why they build 'levels' in a game. If experience or knowledge is low and challenge is high it leads to anxiety, so games provide scaffolding like hints; if knowledge is high and challenge is low it leads to boredom, and to beat boredom games allow the players to quickly get to the next level of challenge. Great lessons here for differentiating learning to suit individual learner needs. Such personalization of learning is becoming more and more doable, as described in detail in Clayton Christensen's book, 'Disrupting Class'.

In his book, '**The Multiplayer Classroom: Designing Coursework as a Game**', game designer turned teacher, Lee Sheldon illustrates many examples of how he has used ARG (Alternate Reality Games) in his classroom. He also incorporates other game mechanics. For example, one of the first things he did was to tell the students that in his class they all start at Grade-F (or Score = 0, as in a game) and that they have to work their way to higher grades. They earn Experience Points for what they do in the class, including one point for simply showing up and work their way to better score/grades, akin to moving to higher levels in a game. 'World without Oil' is an example of an ARG to solve real-world problem by chronicling alternate future scenarios.

In summary, by deconstructing good games we can identify elements that can be used to augment learning. A good game constitutes a challenge that players have an intrinsic motivation to undertake and master, it has innovative and constantly changing stimulus that ensures intense engagement, it allows autonomous choices while incorporating a rule system that ensures fair play and clear winning conditions, it has instant, juicy and informative, non-judgmental feedback that improves performance, it provides a safe but not sterile place where consequences are not dire, frustration is taken in stride, failure is less shameful and in collaboration there is mutual respect, trust, benevolence and empathy. Surely these are ingredients that can be borrowed for enhancing any learning experience – be it formal education or an app.

I look forward to your support in building this community. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

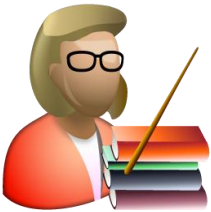
[www.mmpant.net](http://www.mmpant.net)

## For Learners

The key take-away from **gamification** for learners is the understanding that something becomes fun and intrinsically motivating when it is relevant to own context. So learn to restructure learning activities such that they are better aligned with your own aspirations. For example, you may think that there is no point studying quadratic equations or Calculus because you will never apply them in your daily life. Change this mindset and instead think of them as a learning experience that helps you figure out how to learn difficult and complex concepts, which is a very useful life skill.



## For Teachers



Think how you can dovetail gaming elements to make your teaching more situated, contextualized and personalized for your learners? What lessons gamification has for adding an emotional impact to a learning experience? How gamification is especially suited to impart 21st century skills like innovative problem solving and empathetic collaboration? How games have a mechanics where assessment is embedded and what lessons this has for finding alternates to weekly tests, which cause unnecessary anxiety and fear of failure and ridicule. Can you embed assessment into learning itself? Project-based work is one example.

Watch a short animated introduction on Gamifying Education:

<http://extra-credits.net/episodes/gamifying-education/>

## For Parents

Why do games hold the rapt attention of players? Don't you wish your children could have similar concentration while studying! In her book 'The Power of Mindful Learning', Ellen Langer explains that the natural state of the mind is to seek variety. Thus, for us to pay attention to something for any amount of time, the image must be varied. For example, we usually have no difficulty in paying attention to play because in play novelty is inherent – every minute of a tennis match is different. The trick to improving attention lies in our ability to vary the target of our attention. We need to figure out ways of looking for novelty in a stimulus that otherwise seems static, say a teacher talking in the class or when we are reading a long research paper. By creating novelty in a stimulus we make it more interesting and hence do not get distracted. Teach your kids how they can make learning an adventure or a game, for example, by reading a story from the perspective of different characters in the story, or making up different endings to the story. Such mental interaction makes the stimulus (learning content) novel and hence more interesting and diminishes distractions.



Short videos on this website explore how fun is the easiest way to change people's behaviour for the better:

<http://www.thefuntheory.com>

## For Knowledge Workers

Analysing the design of great games provides an insight into self-motivation – how games can make players toil and persevere. In his book 'Drive – Surprising Truth About What Motivates Us', author Daniel Pink explains that motivation 1.0 was based on our biological drive of survival and growth, motivation 2.0 is based on 'carrot and stick' approach, but we are now moving towards motivation 3.0, that Pink describes as **AMP** – **A**utonomy, **M**astery and **P**urpose.



**Autonomy:** the urge to direct our own lives, **Mastery:** the desire to get better and better on something that matters, and **Purpose:** a yearning to do something larger than our self-interest. Knowledge workers can learn from games that beyond material rewards, a key motivator we have is our innate desire to excel, and use this understanding to become excellent lifelong learners, who yearn to learn.

Dan Pink's TED talk – The Puzzle of Motivation: [http://www.ted.com/talks/lang/en/dan\\_pink\\_on\\_motivation.html](http://www.ted.com/talks/lang/en/dan_pink_on_motivation.html)



## Free Course of the Week

**Gamification** is the application of digital game design techniques to non-game problems, such as business and social impact challenges. Video games are the dominant entertainment, because they are powerful tools for motivating behavior. **Kevin Werbach** is a leader in the emerging field of gamification.



<https://www.coursera.org/course/gamification>

## Book of the Week

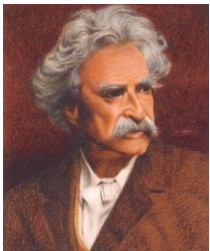


**“The Multiplayer Classroom: Designing Coursework as a Game”** by **Lee Sheldon** is a how-to guide to creating games for the classroom to better reach today's students. The book shows the reader how to create a teaching tool that will engage and excite students by using styles and formats found in popular video games. Readers will learn how to create a variety of multiplayer games on any subject, following the techniques and case studies presented. Bring your classroom into the 21st century.

Facebook page:

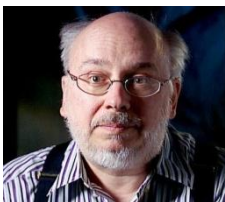
<https://www.facebook.com/MultiplayerClassroom>

## Quotes of the Week



***“Work consists of whatever a body is obliged to do, and Play consists of whatever a body is not obliged to do.”***

— Mark Twain (in Adventures of Tom Sawyer)



**Prof. Henry Jenkins**, former MIT Education Arcade program faculty member, quips that he has seen students playing Sid Mier's famous game 'Civilization' and to win they enthusiastically cheat by reading their history textbooks!

## App of the Week



**123D Make** is all about converting your 3D models into 2D pieces for easy assembly, complete with animated instructions. You can print out the patterns and cut the pieces yourself.

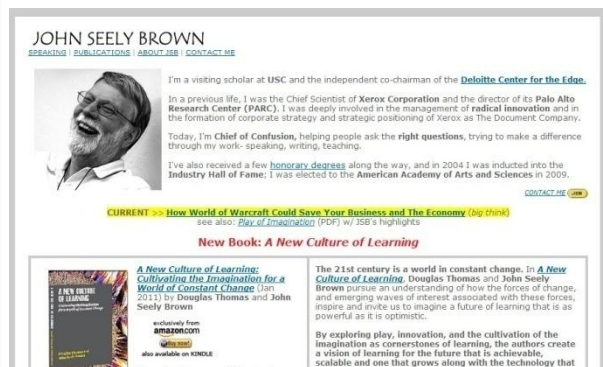
**123D Make** Intro iOS app is FREE and available for the iPhone and iPad.

<http://www.123dapp.com/make>

## Website of the Week

**John Seely Brown**, who calls himself the Chief of Confusion. He is a visiting scholar and advisor to the Provost at University of Southern California (USC) and the Independent Co-Chairman of the Deloitte Center for the Edge.

Prior to that he was the Chief Scientist of Xerox Corporation and the director of its Palo Alto Research Center (PARC)—a position he held for nearly two decades.

A screenshot of John Seely Brown's website. At the top, it says "JOHN SEELY BROWN" with links for "READING", "PUBLICATIONS", "ABOUT JSB", and "CONTACT ME". Below this is a portrait of John and a bio: "I'm a visiting scholar at USC and the independent co-chairman of the Deloitte Center for the Edge. In a previous life, I was the Chief Scientist of Xerox Corporation and the director of its Palo Alto Research Center (PARC). I was deeply involved in the management of radical innovation and in the formation of corporate strategy and strategic positioning of Xerox as The Document Company. Today, I'm Chief of Confusion, helping people ask the right questions, trying to make a difference through my work: speaking, writing, teaching. I've also received a few honorary degrees along the way, and in 2004 I was inducted into the Industry Hall of Fame; I was elected to the American Academy of Arts and Sciences in 2009." There is a "CONTACT ME" button. Below the bio, there's a section "CURRENT -> How World of Warcraft Could Save Your Business and The Economy (big think)" with a link to "see also: Play of Imagination (PDF) w/ JSB's highlights". Underneath is "New Book: A New Culture of Learning" with a book cover image and a description: "A New Culture of Learning: Cultivating the Imagination for a World of Constant Change (Jan 2011) by Douglas Thomas and John Seely Brown. The 21st century is a world in constant change. In A New Culture of Learning, Douglas Thomas and John Seely Brown pursue an understanding of how the forces of change, and emerging waves of interest associated with these forces, inspire and invite us to imagine a future of learning that is as powerful as it is optimistic. By exploring play, innovation, and the cultivation of the imagination as cornerstones of learning, the authors create a vision of learning for the future that is achievable, scalable and one that grows along with the technology that..."

<http://www.johnseelybrown.com>

## Video of the Week

**Gamification** is an inadvertent con. It tricks people into believing that there's a simple way to imbue their thing ... with the psychological, emotional and social power of great game.

**"Paideia as Paidia – From Game-based Learning to a Life Well-Played"** – Sebastian Deterding.



<http://bit.ly/LS6coD>

## Acknowledgement



It is becoming obvious for some time that now and in the years to come, a 'fit for the classroom model' of the world may not be adequate for education and learning. The Science laboratory, project work and Case Studies are all examples of the same philosophy. Sometime in the future we will be tackling real life problems maybe at first degree stage rather than at Ph.D. or later. In the meantime we need to look at many other metaphors that help us go beyond the Class-room model. The Gamifying of Learning is one such approach. **Atul Pant** has devoted a large amount of time to explore and ponder over the potential of such alternatives.

Atul has drawn up the entire contents of his issue and I am sure will volunteer to do so for a few other forthcoming issues. A very special thanks and appreciation to Atul for his contribution.

Atul is the founder of **Timeless Lifeskills Limited** ([www.TimelessLifeskills.co.uk](http://www.TimelessLifeskills.co.uk)), a UK based company providing learning solutions on skills and dispositions essential for thriving in the 21st century. He has authored two books - 'Fire Up the Learner Within – The Art of Self-Directed Learning' and 'Only the Curious Shall Thrive – Strategies for Lifelong Learners to Formulate Insightful Questions'. He is passionate about creating and curating content on life skills ([www.Facebook.com/Lifeskills](https://www.facebook.com/Lifeskills)).

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0013

24<sup>th</sup> September 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



We are witnessing an unprecedented pace of creation of new Higher Education Institutions in India. It is an interesting mix of a large number of IIT's, IIM's, IIIT's, and many other acronyms putting together Science, Education, Management, Technology, Law, Fashion, Design etc. to create a variety of possible permutations. It is also acknowledged that we don't have requisite faculty resources, much less the Educational Leadership to make this happen.

On another dimension, 'Education Hubs', 'Knowledge Parks' and 'Education City' are being planned across the Planet.

We also have rather disappointing news that none of our 'prestigious' Higher Education Institutes have made it within the top 200. Our PISA participation showed the dismal state of our early education.

Massachusetts Institute of Technology topped, for the first time, the QS World University Rankings released some time back. Six of the top 10 varsities are from the United States while the survey showed a trend of "tech-focused universities across the world on an upward trajectory."

University of Cambridge, United Kingdom and Harvard University, United States, are placed second and third, respectively, followed by University College London and Imperial College London.

As regards India, seven Indian Institutes of Technology (IITs) ranked from 212 downwards, "but top (university) is Delhi (at) 441", tweeted QS, comparing it with China, which has seven in the top 200. IIT Delhi is ranked 212, IIT Bombay 227, IIT Kanpur 278, and IIT Madras 312.

QS also released the QS Best Student Cities ranking for the first time. According to the survey, Paris is the world's best city in which to be a student. Having stayed for a week at the Cite de Universitat at Paris this summer, I can appreciate the far sightedness of that move. The others are Boston (#2), London (#3), Melbourne (#4) and Vienna (#5).

But in the US itself, there is a stream of thought that they may be 'losing it' and there are several assertions of 'declining by degrees' and of imminent disruptions in Higher Education.

**Special issue  
on  
Disruption of  
Higher  
Education**



The general disruption favouring view is from experiments like Khan Academy of Salman Khan and the MIT Open course initiative now evolved into an OER movement and with entities like Coursera, Udemy and edX leading the race for a new format of higher education.

There is a recent book by Clayton Christensen on the same subject. The general flow of this discourse is that it is the Internet and allied technologies that are the main cause of the disruption.

When we look at our context, and think beyond the Internet there are many interesting disruptive possibilities, and of course technology can then give this new model a push towards greater efficiency and effectiveness.

Some of fundamental shifts between the traditional context and scenario of higher education and the present and future are:

- Moving from an exclusive, for the few to an inclusive for almost everyone (the declared philosophy of substantially increasing the GER in Higher Education).
- Size of cohort moving from about 20 or so to 1000 to 10000 as in MOOCs.
- Reducing training calendar time by flexible learning times. Move to 2 year undergraduate degree and 1 year MBA programs.
- Do away with 'taught masters' programs and similar purely information based programs. These can be done by OER content and credentialing by a pool of award giving bodies.
- Authority driven Systems design, regulations and procedures should be superseded by data driven, algorithms and heuristics driven learning Analytics to drive good decision making by competent professionals.
- Focus on the most important and essential functions of higher education and try to reduce or eliminate completely non-essential functions. In the past a higher education Institute like a University was complete in itself as were many large industrial enterprises. Today such an Institution must integrate itself with the rest of Society, be a part of it, share resources with it and relate to it, rather than being an 'ivory tower'.
- So there can be specialised companies running the financial, payroll and HR functions of all Higher Education Institutes, providing efficiency and cost savings to all. Ditto for routine administrative, admission, placement etc.
- Separation of the assessment, recognition and teaching functions to be done by 3 independent bodies. This is analogous to the separation of the executive, the legislature and judiciary in good Governance.
- The need for Specialised assessment agencies cannot be over-emphasised. There is no standardisation and quality assurance among various awards, so we continue having more and more tests like GATE , CTET and NET etc. The Public Service Commissions the Centre and State were created to bring about such quality and standards in public services recruitment. And many use standardised tests by non-Government or private bodies such as SAT, GMAT, LSAT etc. So what is being suggested is more of an extension than a real disruption. And 25 years ago, a National Testing Service was actually proposed as part of the 1986 National Education Policy.
- We urgently need a National Qualification Framework to help a variety of education providers, State level, National level as well as interested International players to be able to provide a range of programs that meet our needs.
- Once the other 2 functions have been divested to specialised organs the core and fundamental activities of creating new knowledge and disseminating the created knowledge and train knowledge workers, the possibility of independent professional educators or independent professors working as a community with codes and bodies for professional conduct, we could see a sea change from existing employee model of faculty.

The above steps could see a new liberalisation and freedom in the education space for both educators and learners and in some situations this difference may become fuzzy with a greater movement towards life-long learning. We are already seeing some steps that may lead towards this.

Postgraduate students of more than 30 disciplines will soon be able to tap an online repository of free, multimedia-enriched self-instructional modules being developed under a government project. The proposed ePG Pathshala website is expected to complement the classroom teaching-learning process.

As part of the Central-government's National Mission on Education through Information and Communication Technology, higher education regulator University Grants Commission has roped in experts from around the country to create e-content for 77 subjects ranging from computer science to philosophy. The first phase of the R84-crore project would cover 35 disciplines, with material being developed for 16 papers per subject, says Ashok K. Bakhshi, who's on the UGC-appointed standing committee and one of the national coordinators of the project.

The portal is expected to let the user self-study, self-assess and explore more through suggested links. The aim is to include e-text (web-based notes, e-books, etc), historical backgrounds to different topics, points to ponder, animations, simulations, virtual labs, quizzes with feedback, multiple choice questions with answers and explanations, audio/video lectures, glossary, and web links, informs Bakhshi. The material would be based on UGC curricula, he says.

"In about two months from now, some work will be uploaded on the website", says Bakhshi. The e-content "must be able to cater to" the needs of college and universities teaching through various modes — conventional, open and distance and virtual.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

The good news for learners is that they will be able to choose courses, programs and combinations that will help them in achieving their goals. Delhi University has been experimenting with the idea of Meta-University. If the concept is accepted then its a natural step to extend the idea beyond just Delhi University Colleges and extend to all partners of an Alliance that accepts common standards for acceptance of 3rd party assessments and credits according to a National Qualification Framework.



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### For Teachers



All teachers must start planning for all their teaching sessions to keep in mind not only the students who are sitting in front of them, but also those participating from remote locations. And then some who may join a-synchronously. This may require a new set of teaching strategies and of course training in such methods.

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### For Parents

As parents, we are very keen that our children get the best opportunities to be educated for success and a fulfilling career. But very often we tend to dwell in the past and imagine a future along the lines of what was the best scenario when we were young learners.



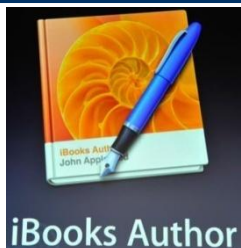
But the future is likely to be very different from the past, and it is important that as parents we keep our minds open to and receptive of newer possibilities, many of them quite transformational and disruptive that we have referred to in other parts of this document.

## For Knowledge Workers

One of the phrases to describe the disruptive transformation, is the phrase used by the founders of the WEU a provider of free education is pre-K to Grey. Also the self University has a tag line which says "The price of tuition is the desire to learn. Your degree is a better life." so with so many opportunities, never stop learning and become a life-long learner.



### App of the Week

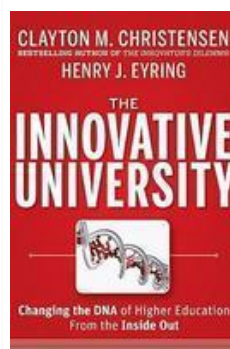


**iBooks Author**

If we were to identify an App as a disruptive App for higher education, then one which will definitely figure lose to or at the top, is **iBooks author** App that allows every academic to become an uh or and publisher. So University Profs no longer need their University press or for that matter the other well known educational publisher.

<http://www.apple.com/ibooks-author/>

### Book of the Week



**"The Innovative University: Changing the DNA of Higher Education from the Inside Out"** by Clayton M. Christensen, illustrates how higher education can respond to the forces of disruptive innovation , and offers a nuanced and hopeful analysis of where the traditional university and its traditions have come from and how it needs to change for the future. Through an

examination of Harvard and BYU-Idaho as well as other stories of innovation in higher education, Clayton Christensen and Henry Eyring decipher how universities can find innovative, less costly ways of performing their uniquely valuable functions.

<http://www.flipkart.com/innovative-university-1118063481/p/itmdy2fauggc4kzj?pid=9781118063484&ref=10798d35-00bd-430a-a812-efaac215e5e1>

### Quotes of the Week



***"Scott and I are both from economically-disadvantaged backgrounds and products of free college education," says Pickering. "It was only because of an athletic scholarship in my case and the Air Force Academy in Scott's that we were both fortunate enough to have access to higher education. We profoundly believe that everyone should have this same opportunity."***

— Curtis Pickering, WEU Chairman and CEO



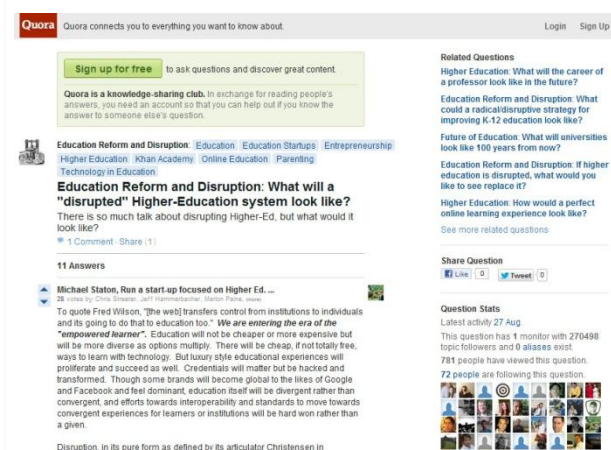
***"You can choose this era as one of threatening change and unsettling volatility or you can see it as a moment charged with the most exciting possibilities presented to educators in our lifetimes with the possibility of better understanding of how we learn and sharing the transformative power of education far beyond the bounds of any single campus."***

—Susan Hockfield, MIT President



## Website of the Week

This time we bring you a page from the **Quora** website that deals with similar questions on disruption in higher education:



<http://www.quora.com/Education-Reform-and-Disruption/What-will-a-disrupted-Higher-Education-system-look-like>

## Video of the Week

The world education university is a good example of a model of disruptive education for higher learning. Quotes from their founders are in the quotes section. Do watch this 10 minute video and get ready to see more disruptions over the next 3 to 5 years:



<http://www.theweu.com/10-Minute-Summary.html>

## Story of the Week

### 4 interesting very short stories of higher ed disruption in the US.

1. The President of Metro State University in Denver, CO, explains the different strategies undertaken by Colorado's institutions, in a recent Denver Post article, Colorado's colleges make tough decisions to ensure survival:

"They're all part of long-term strategies that we're all making — really tough decisions that will ultimately determine, in many respects, whether those schools survive or not," Jordan said. "I see that playing out in all our institutions around Colorado. We all have different missions and different sets of problems, but ultimately we're all in the same place: What are we going to do to ensure the long-term survival of our universities?"

Colorado's strategies include:

- changing colleges to universities (to attract more out-of-state students), possibly building a \$250 million football stadium (to raise Colorado State University's profile),
- creating a new tuition rate for undocumented students (more than in-state, but less than out-of-state), and
- attempting to increase visibility with Latino students (becoming a Hispanic Serving Institution has the potential to double federal funds available to the University).

2. Last year Sewanee received national attention by cutting tuition; last week it was Concordia University, which cut its tuition for 2013-14 by \$10,000 or about thirty-four percent. The Minneapolis Star Tribune subhead tells it all: The St. Paul university hopes that a lower sticker price will impress a public weary of the high cost of college.

Just a handful of Concordia undergrads now pay the full \$29,700 in tuition and fees. But Concordia hopes to attract families who are being scared off by the published price.

"It's been a bigger and bigger challenge for us to get those individuals to even consider us," said Prof. Eric LaMott, Concordia's senior vice president and chief operating officer. "The high discount isn't fixing the problem, because they don't even look."

Concordia believes it's making a bold move toward greater affordability and transparency in a marketplace that's demanding both.

Publicity stunt or reality check? Enrolment management professional and consultant, Dan Lundquist, wrote about Concordia and the college sticker price on a college marketing firm's blog: Dan Lundquist on Concordia's Tuition Reset. It's an interesting read, both for more information on Concordia's "right pricing" experiment and some historical context:

Back before the federal government busted the so-called Overlap Group (the Ivies and MIT) for collusion and price-fixing, we in the admissions office would compare prices and financial aid offers with our core overlap group (AKA "competitors") in hopes that we could minimize the role the cost would play in college choice. But there was another result; one that I honestly believe at the time was unintended. Penn's president Martin Meyerson said it best: "We were building up a kind of notion about colleges and universities that the higher the price, the better they were." (Stanford's finance vice president Bill Massy was blunter: "The theory was, basically, we will increase tuition as much as the market will bear.")

3. Meanwhile, a new state law in Ohio – which currently awards a degree to only 56 percent of their students in six years — requires the public universities to show students how they could earn a bachelor's degree in three years.

"College is not getting any cheaper," said Jim Petro, chancellor of the Ohio Board of Regents.

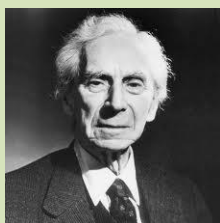
"One sure way that families can bring that cost down is by doing it in a shorter time span," Petro said. "I don't know when it became almost practical in Ohio that many students take five, six years to get a degree, but that really drives up the cost."

The law didn't set goals for the number of three year degrees — those range from one to three percent of students now. One hope expressed by state officials is that, by showing students the path toward completing a degree in three years, the universities will increase the number of students earning a bachelor's degree in four.

4. Finally, let's circle back to Colorado, specifically Colorado State University-Global Campus, which announced last week it will be the first US university to accept transfer credits for Udacity, the Stanford University MOOC spinoff. Katherine Mangan writes, in the Chronicle of Higher Education, A First for Udacity: a U.S. University Will Accept Transfer Credit for One of Its Courses.

The university decided to accept the transfer credits after a committee of four faculty members in information technology reviewed the Udacity course and its methods of assessing student learning."We believe that as a public university, affordability and accessibility are key," said Becky Takeda-Tinker, president of the Global Campus.

A few minutes searching online could bring up several more examples. Do share with us, if you find something disruptive and inspirational.



***"Three passions, simple but overwhelmingly strong have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind."***

— Bertrand Russell

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



Issue: 0014  
1<sup>st</sup> October 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



For the first time in history, we are finding that for digital devices, acquiring one is less of a challenge than being able to effectively deploy it for use. ICT Skills are the foundation of ICT Culture in Education; and at the same time also the cause of the digital divide. The technology is worthless unless people can effectively use and are willing to use it. The concept of digital divide is also changing. Offering a phone or computer will not in itself bridge the **"Digital Divide"**.

The digital divide in education is not just about access to technology. It separates those with the competencies and skills to benefit from computer use from those without. Further, within the educational institutions, digital divide between young students and adult staff is increasing. A recent conference ICTCE 2012 on ICT Culture in Education organised by ETMA deliberated on the ways of improving the skills to bridge the gap so that ICT becomes a culture of the education system.

The multiple challenges to our education system of access, universalization, quality, 21st century readiness and costs can all be adequately responded by the twin technologies of cloud computing and Tablets as knowledge access devices. It is easy enough to distribute millions of Tablets, but they have to be ready for learning.

This can be done by having a store and exchange for Educational Apps, which has a recommendation engine based not only on popularity, but also on educational quality and usefulness ratings and checklists based on rubrics developed by experienced educators. Tablets can be used both in the classroom as well as for self-learning. Role of teachers moves from didactic delivery of content to interactive transaction of content.

The term **"Digital Divide"** originated in the spirit of 'haves' and 'have-nots' and emphasized the issue of access. The dividing line is somewhat blurred with ubiquitous computing, the cloud, low cost hand-held access devices and open education resources, being shareable under a Creative Commons license.

We therefore now have a number of skill domains that go beyond digital to maybe cultural for flourishing and thriving in the future. And since success happens when preparation meets opportunity, anticipating these is very important.

Rapid massive training in the new skills, especially aimed at the Middle of the Pyramid referred to in the quotation below, has the potential of transforming the 'Digital Divide' of yesterday to 'The Digital Dividend' of tomorrow.

**Special issue  
on  
ICT Skills and  
Digital Divide**



However this has to be looked upon as a complete ecosystem rather than just the distribution of devices, which is just the first step.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

You are probably ahead in the learning curve, and have a head start in use of new technologies. But this is a very rapidly evolving field and therefore keep exploring new dimensions and do not stagnate. Very often people become comfortable with what they know and resist change. The ICT revolution has just begun. It isn't over yet, and maybe five years from now we may say, like it was said for the Bolshevik revolution "The revolution is over".



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### For Teachers



Teaching with new technologies when your learners have a head start can be quite challenging. Since these technologies have appeared recently, it is sometimes mistakenly assumed that being able to quickly press a few buttons or move the mouse makes one smart.

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### For Parents

One of the dilemmas that parents today face is that on the one hand, their children are comfortable with usage of computing devices, but on the other hand genuine on formation handling skills may not have developed.



One research demonstrated that while 75% of a group of children aged between 2 to 5 years were able to manipulate the mouse of a PC, only 11% could tie their shoe-laces. All parents must observe the development of cognitive skills. The technology does help in improving them, so keep encouraging.

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### For Knowledge Workers

The rate of development of new platforms, new tools and new Apps that enhance productivity and efficiency is unprecedented. In this issue itself we refer to an interesting App from Lumosity for brain development.

Continuous reflection on one's level of ignorance and a strong determination to move through the different levels of skills from ignorance to fluency in the new skills is the only way of succeeding.



## App of the Week

**Lumosity Brain Trainer** by Lumos Labs, is a very interesting free App that helps build the cognitive skills. "We can indeed form new brain cells, despite a century of being told otherwise. Playing some of these brain games a few minutes every day may help you become better at problem solving skills and some of the others identified as 21st century skills.



<http://itunes.apple.com/us/app/lumosity-brain-trainer/id338945375?mt=8>

## Book of the Week

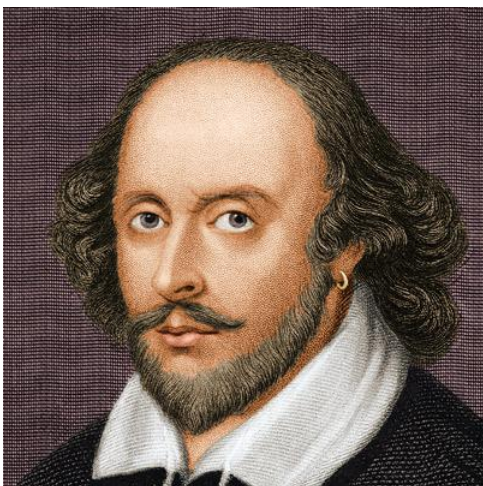


**"Innovation in Education: Lessons from Pioneers Around the World"** written by **Charles Leadbeater** explores the work of 16 pioneers around the world who have developed new, effective approaches to education that work at scale. These pioneers are almost all drawn from applicants for awards from

the World Innovation Summit for Education (WISE). By tracing the story of how these pioneering innovations came about, developed, spread and grew to scale, the book aims to raise awareness of why innovation in education is needed, where it comes from and how it can be generated.

[http://www.flipkart.com/innovation-education-9992194448/p/itmd9z6yjcdu3x?pid=9789992194447&ref=a7de38d2-3d61-400f-b558-a25df0d67534&srno=s\\_1&otracker=from-search](http://www.flipkart.com/innovation-education-9992194448/p/itmd9z6yjcdu3x?pid=9789992194447&ref=a7de38d2-3d61-400f-b558-a25df0d67534&srno=s_1&otracker=from-search)

## Quotes of the Week



***"The fault dear Brutus is not in our stars, but in ourselves that we are underlings."***

— Cassius in *Julius Caesar* by William Shakespeare



***"The Top of the Pyramid (TOP) is saturated. The Bottom of the Pyramid (BOP) is trapped in poverty. Human civilization's hope lies in unlocking human potential in the Middle of the Pyramid (MOP)."***

—Craig Warren Smith, Founder Digital Divide Institute

## Website of the Week

The world is undergoing an Information Communications Technology (ICT) revolution, a revolution that has enormous social and economic implications for the developed and less developed countries of the world.



<http://www.bridgethedigitaldivide.com>

## Video of the Week

This video is an exploration of the definition of literacy: more specifically, of what it means to be a literate person in the 21st Century. Both producers are reflective practitioners who have strong literacy backgrounds. As practising teachers they have a vested interest in this subject.



[http://www.youtube.com/watch?v=Wn0\\_H-kvxkU&feature=player\\_embedded#!](http://www.youtube.com/watch?v=Wn0_H-kvxkU&feature=player_embedded#!)

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0015  
8<sup>th</sup> October 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



Last month I was in **Penang** and met with **Ishan Sudeera Abeywardena**, of the **Wawasan Open University** who introduced me to the idea of 'throwaway technologies' and I would recommend reading his blog and articles on the subject. And almost immediately after that I was at Ahmedabad and saw long queues and traffic jams, because it seemed that the entire city was busy in the immersion of the many **Ganapatis**. In another few weeks we will be witnessing the immersion of **Ma Durga** across large parts of India. So, why do we create such beautiful idols, worship them for some time and then do '**visarjan**' of perfectly functional and usable statues. Not only that in order to be able to do so, we discourage idols made of plaster of Paris or other non-perishable materials.

It is the western world and in particular the USA which gets blamed for having created 'planned obsolescence' and a whole business and economic model out of it, beginning with Gillette's disposable blades and almost free razors to the present throwing away a perfectly functional mobile phone, because something newer has come along.

If you've replaced a computer lately--or a cell phone, a camera, a television--chances are, the old one still worked. And chances are even greater that the latest model won't last as long as the one it replaced. Welcome to the world of planned obsolescence--a business model, a way of life, and a uniquely American invention that this eye-opening book explores from its beginnings to its perilous implications for the very near future. The book referred to in this issue builds upon this theme.

History reserves a privileged place for those societies that built things to last--forever, if possible. What place will it hold for a society addicted to consumption--a whole culture made to break? This book gives us a detailed and harrowing picture of how, by choosing to support ever-shorter product lives we may well be shortening the future of our way of life as well.

The movement towards conservation and sustainable development opposes this senseless trashing of the old. Our Indian tradition encourages us to touch Mother Earth every morning soon after we get up and beg forgiveness for trampling upon her. There is a Sanskrit sloka:

Special issue  
on  
'Throwaway  
Technologies'



which translated into English means "**Oh ocean girdled and mountain breasted mother, forgive me for trampling on you**". The key philosophy being that we must bring about the least disturbance to the fragile Eco-system.

But what applies to the world of atoms and molecules, matter as we describe, does not apply to the world of knowledge and ideas, as you will see in one of the quotes below. The poet Tennyson wrote "The old order changeth, yielding place to new, and God fulfils himself in many ways lest one good custom should corrupt the world". As a school-goer when I read this poem, I used to wonder how a good thing could spoil the world. But now, I appreciate it more and that is why big monopolies are often broken by anti-trust judicial action.

Since modern ICT promotes ideation, knowledge creation and solving some of the very challenging and complex unsolved problems of humanity, we must embrace this acceleration and not decry it. Yes the rapid e-waste generation is a problem, but it is the same technology, especially the 3D printing technology that may overcome the non-usability of many earlier products for which manufacturer does not make parts, by making custom on demand components.

Let's accept and adopt this change, not get too attached to existing technologies, and gladly adopt throwaway technologies, because they push us farther on the path of a better understanding of the world.

I look forward to your support in building this community. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

It is natural for young learners to be able to accept and adopt new technologies without formally being taught how to use it. With such ever powerful tools at their disposal, this will create a new generation of learners comfortable and adept in creativity and innovation.



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### For Teachers



The challenge for teachers is to not be overwhelmed by the sheer quantum and speed of emerging technologies. They will have to continuously strive to learn new techniques and tools, only to forget them in a short time and re-learn new skills very soon.

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### For Parents

Several years ago, a number of young teachers who were also parents complained about the rapid changes in the technologies and wondered how they could ask their schools to keep up with the new changes and enhanced financial investments.

I drew an analogy to the rapid rate at which children grow, outgrowing their shoes, clothes and toys every 6 months or so. We appreciate this rapid growth and do not wish this to be stunted, but rather encourage it.



## For Knowledge Workers

Not only do all these throwaway technologies affect the educational landscape, they will very soon affect the workplace as well. With more and more sensory inputs and alternatives to keyboard and mouse becoming common place, there may be a new paradigm of wearable computers and immersive computing.



### Quotes of the Week

***"Don't throw away the old bucket until you know whether the new one holds water."***

— Swedish Proverb

***"Much may be done in those little shreds and patches of time which every day produces, and which most men throw away."***

— Charles Caleb Colton



***"One should be willing to throw away a dozen ideas to come up with a good one, just as one should throw away a dozen words to come up with the right one."***

— James Gunn

### App of the Week



Use this App (Gliph) to Create Anonymous, Disposable Email Addresses.

**Gliph** is like a Guy Fawkes mask for your online identity. It's a free app for iPhone, Android and the mobile Web. You can use it to send encrypted text messages to other Gliph users with as

much or as little personal information exposed as you want. And starting today, you can also use it to send and receive email to anyone through your regular email client without ever exposing your identity or information.

<http://itunes.apple.com/us/app/gliph/id501269250?mt=8>

### Free Resources of the Week

Do We Need to Throw Away an Old Technology Every Time a New One Comes Along?



<http://voices.yahoo.com/do-we-throw-away-old-technology-every-time-11496038.html>

### Book of the Week



**"Made to Break: Technology And Obsolescence in America"** by Giles Slade, Harvard University Press.

Made to Break is a history of twentieth-century technology as seen through the prism of obsolescence. America invented everything that is now disposable, Giles Slade tells us, and he explains how disposability was in fact a necessary condition for America's rejection of tradition and our acceptance of change and impermanence. His book shows us the ideas behind obsolescence at work in such American milestones as the inventions of branding, packaging, and advertising; the contest for market dominance between GM and Ford; the struggle for a national communications network, the development of electronic technologies--and with it the avalanche of electronic consumer waste that will overwhelm America's landfills and poison its water within the coming decade.

[http://www.flipkart.com/made-break-0674025725/p/itmcczh4wz4cfbph?pid=9780674025721&ref=1222fdbcdcc-4547-b0fb-a34ed156447a&srno=s\\_1&otracker=from-search](http://www.flipkart.com/made-break-0674025725/p/itmcczh4wz4cfbph?pid=9780674025721&ref=1222fdbcdcc-4547-b0fb-a34ed156447a&srno=s_1&otracker=from-search)

## Website of the Week

**Tech-conference : living in the future : Throw away your mouse and keyboard – Future of computing**

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#### Throw away your mouse and keyboard – Future of computing

September 4, 2012 by shubham gupta | Leave a comment

For the first time with the help of Leap Motion technology users can interact directly with their computer system. Throw your keyboard and mouse away as they are getting outdated and replace them with this type of interactive device.

What is Leap motion?

Leap Motion is a startup developing advanced motion sensing technology for human-computer interaction. Originally inspired by frustration surrounding 3D modeling using a mouse and keyboard, Leap Motion asserts that modeling virtual clay should be as easy as molding clay in the real world.

This form of interaction is an entirely new way to send digital instructions to your computer system

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<http://techconference.in/2012/09/04/throw-away-your-mouse-and-keyboard-future-of-computing/>

## Video of the Week

**DISPOSABLE TECHNOLOGIES  
Driving Cost Out of Biomanufacturing?**

**Peter Latham, President, BioPharm Services,  
Interviewed by Haydia Haniff**

Recent analyses of the cost effectiveness of using disposables versus stainless steel.



<http://www.youtube.com/watch?v=qsS3MF1mXAQ&sns=em>

# Enlightened Parenting for School-going Learners

**Helping Parents Better Manage their Children's Educational Needs**

## Why this Program?

This course is perhaps the only one of its kind ; a refreshing and practical guide for parents, teachers and caregivers. It reminds us that parenting, like life, is an adventure that requires planning and organization while operating within the rules and guidelines of nature. The course contents clearly and effectively communicate the importance of self realization by developing and nourishing our own souls in order for us to become effective role models and parents for our children.

## Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "smartparent21@gmail.com".

Brought to you by:





# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0016  
15<sup>th</sup> October 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



The traditional formal education system is entirely centered around individual excellence and does little to promote collaborative learning. Being able to provide the correct answers to questions entirely by yourself without any support or interaction with learning resources and fellow learners is the hallmark of excellence. In some institutions abroad and in some exams in some courses at the IIT Kanpur, we did use 'open book' examinations, but the assessment was still of an individual. Even in a group project work, when evaluating, we tend to ask the learner to emphasize his direct and specific contribution. But co-operative and collaborative learning is not really acknowledged.

But today access to learning resources is easy, and tools to support group learning are common place and greatly used for oral interaction. So why do we shy from using it to augment learning? Even the traditional classroom can become an augmented classroom by bringing in these learning

resources into any classroom where learners can have Internet access. And this means almost every classroom.

The obstacle and challenge is not of technology access, but of a teaching-learning mindset that does not embrace a new paradigm of learning.

In the recent past, two very interesting major steps in solving almost unsolvable problems were by co-operative teams working on the Internet. One was the proof of Fermat's last theorem and the other was breaking the RSA129.

Even the most recent discovery of the Higgs Boson was made possible, because the large amount of data generated by the Large Hadron Collider at CERN was analyzed by teams of Scientists from all over the world.

In small groups, students can share strengths and also develop their weaker skills. They develop their interpersonal skills. They learn to deal with conflict. When cooperative groups are guided by clear objectives, students engage in numerous activities that improve their understanding of subjects explored.

In order to create an environment in which cooperative learning can take place, three things are necessary. First, students need to feel safe, but also challenged. Second, groups need to be small enough that everyone can contribute. Third, the task students work together on must be clearly defined. The cooperative and collaborative learning techniques presented here should help make this possible for teachers.

**Special issue  
on  
Co-operative &  
Collaborative  
Learning**

Also, in cooperative learning small groups provide a place where:

- Learners actively participate;
- Teachers become learners at times, and learners sometimes teach;
- Respect is given to every member;
- Projects and questions interest and challenge students;
- Diversity is celebrated, and all contributions are valued;
- Students learn skills for resolving conflicts when they arise;
- Members draw upon their past experience and knowledge;
- Goals are clearly identified and used as a guide;
- Research tools such as Internet access are made available;
- Students are invested in their own learning.

The philosophy of creating learning communities and teams of co-explorers working together rather than being fed wisdom by an all-knowing superior is the way we are headed.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### **For Teachers, Learners, Parents and Knowledge Workers**

Here is some advice from Dylan William on developing collaborative learning opportunities:

Collaborative learning in the classroom works when you have group goals, so you have students working as a group rather than just working in a group, and individual accountability, so that every single student is individually accountable as well as collectively accountable so you can't have any passengers. There are many ways in which teachers can set those two conditions but if you can establish group goals with individual accountability then the research evidence suggests that can approximately double the speed of student learning.

When you create accumulative learners – when you create a group of people who meet collectively on shared goals to help each other master something – something rather magical happens. You actually get a higher level of achievement, greater sustained engagement than you can do on your own. The school, students and the teachers are collectively engaged, collectively participating, in this joint venture of helping everybody grow. And of course then you have all the consequences of that - teachers will still be learners as well as teachers, students will be teachers as well as learners. So a blur in those roles, shared goals, mutual respect, valuing each person as an individual and helping them achieve the most they can.

A good example of a way teachers would set up group goals with individual accountability is set a task for a group in which different students have different roles. A common mistake teachers then make is to assign the role of the reporter to one of the students at the beginning of the task - that's a big mistake because it doesn't create individual accountability. You have group goals but everybody who knows they are not the reporter knows that they are not going to be required to speak on behalf of the group so their focus, their attention and concentration will dip. If everybody in the group knows that they may be called on to be the reporter for the group then you have set up a situation in which they're collectively responsible and individually accountable.

The research shows that you have to create these two conditions - this collective responsibility group goals and making students individually accountable and that's when you get the most effective group work situations. As Bob Slayven's own research shows, most group work in schools fails to meet at least one of these two conditions and therefore is ultimately ineffective. Jigsaw groups don't work: they have great fun but there is no evidence that they cause any more learning than other kinds of approaches. The only conditions under which you will get effective improvement of learning over standard operating procedure are to create group goals and individual accountability.

## Quotes of the Week

This week quotations are almost the accepted definitions of the two terms:

***"Collaborative learning' is an umbrella term for a variety of educational approaches involving joint intellectual effort by students, or students and teachers together."***

— A. Goodsell, M. Mather and V. Tinto. Collaborative Learning: A Sourcebook for Higher Education, 1992

***"Cooperative learning' is a relationship in a group of students that requires positive interdependence (a sense of sink or swim together), individual accountability (each of us has to contribute and learn), interpersonal skills (communication, trust, leadership, decision making, and conflict resolution), face-to-face promotive interaction, and processing (reflecting on how well the team is functioning and how to function even better)."***

— (From the Coop Learning Center of U Minnesota Web site: <http://www.co-operation.org/index.html>)

## Free Resource of the Week

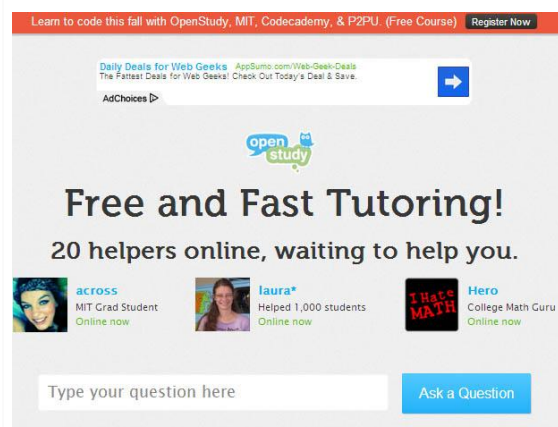
A very useful free resource on Collaborative Learning is a Wikipedia article whose link is :

[http://en.wikipedia.org/wiki/Collaborative\\_learning](http://en.wikipedia.org/wiki/Collaborative_learning)

Collaborative learning is heavily rooted in Vygotsky's views that there exists an inherent social nature of learning which is shown through his theory of zone of proximal development. Often, collaborative learning is used as an umbrella term for a variety of approaches in education that involve joint intellectual effort by students or students and teachers. Thus, collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning

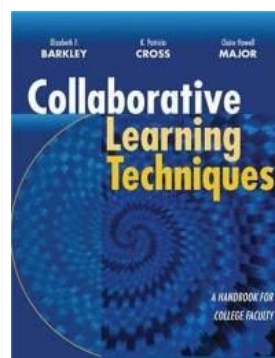
## App of the Week

**OpenStudy** (<http://openstudy.com>), an open platform that leverages crowdsourcing, is a collection of study groups based on any given topic. Anyone can join the discussions at any level to learn with like-minded people both in and out of school. It is open to anyone over the age of 13, anywhere in the world. It's a great resource for people currently in school or for those who just want to learn new material.



Users can post questions or answer others' questions as well as participate in in-depth conversation on any subject ranging from history to English (both literature and as a language). It is the brainchild of UC Irvine, MIT, NYU, Smart History and Free Math Help.

## Book of the Week



**"Collaborative Learning Techniques: A Handbook for College Faculty"** is written by Elizabeth F. Barkley, K. Patricia Cross, Claire Howell Major.

Engaging students in active learning is a predominant theme in today's classrooms. To promote active learning, teachers across the

disciplines and in all kinds of colleges are incorporating collaborative learning into their teaching. Collaborative Learning Techniques is a scholarly and well-written handbook that guides teachers through all aspects of group work, providing solid information on what to do, how to do it, and why it is important to student learning. Synthesizing the relevant research and good practice literature, the authors present detailed procedures for thirty collaborative learning techniques (CoLTs) and offer practical suggestions on a wide range of topics, including how to form groups, assign roles, build team spirit, solve problems, and evaluate and grade student participation.

<http://www.amazon.com/Collaborative-Learning-Techniques-Handbook-College/dp/0787955183>



## Website of the Week

**University of Minnesota** has a Web site for its **Cooperative Learning Center** that has a lot of very useful information:

Cooperative Learning Institute And Interaction  
Book Company



### Home

The Cooperative Learning Institute is an innovative nonprofit Institute established in 1987 to advance the understanding and practice of cooperation and constructive conflict resolution. We have two missions. The first is to advance the theory and research on social interdependence (i.e., cooperative, competitive, individualistic efforts) and constructive conflict among individuals, groups, organizations, communities, cultures, and

### Pages

- Home
- Introduction to Cooperative Learning
- The Theory And Research Division
- The Practice And Implementation Division

<http://www.co-operation.org>

## Video of the Week

**Dylan William** has an excellent video on Collaborative Learning, where he shares his views on the benefits of learners working in group situations and the importance of group goals and individual accountability. Do have a look:



<http://www.youtube.com/watch?v=bkIIS61qQA>

## Story of the Week

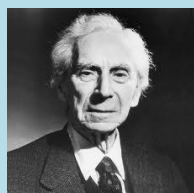
We have all heard this story as children, but the theme of working in unison is once again very timely and appropriate. Also the role of the 'net' has changed. From entrapping us to liberating us.

A flock of hungry pigeons were flying across the sky in search of food. Having travelled a long distance, they felt tired and settled down on a tree. Just below the tree, they saw grains strewn all over the ground. The pigeons were happy to have found enough food to eat. All the pigeons came down from the tree and started eating the grains. As they were doing so, a huge net fell on them and trapped them all.

The pigeons were taken aback. They noticed a hunter sitting at a distance from the tree, a bow and arrow in hand. The pigeons realized it was the hunter who had attracted them by strewing the grains and it was he who had trapped them in the net. The hunter got up and began to move towards the pigeons.

The leader of the pigeons spoke, "Friends, we are in great trouble. But let us not lose courage. The hunter will catch us if we do not act swiftly in a few seconds. There is only one option available at this moment. Let all of us use our force together and fly in unison up along with the net. If all of us use our force and fly together, we can fly carrying the net along with us. Let us start now."

All the pigeons agreed with him and flew high carrying the net along with them. After travelling sufficient distance away from the hunter, the pigeons reached a safe place. There lived a rat who was friend of the pigeon leader. The rat and its team cut the net and set the pigeons free.



***"The fact that an opinion has been widely held is no evidence whatever that it is not utterly absurd; indeed in view of the silliness of the majority of mankind, a widely spread belief is more likely to be foolish than sensible."***

— Bertrand Russell

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

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22<sup>nd</sup> October 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



The other day, I was invited to a prestigious School in Delhi to talk to the parents on: **"Every Child .....a winner"** : Developing Confidence that lasts a lifetime:

To me it was a great opportunity to share with parents, thoughts about raising curious, thinking children who would grow up into well adjusted adults who would flourish and thrive in the future.

Most Schools and parents together end up doing exactly the opposite. Pushing children into slots created from the mind-sets and experiences of the past, they cast them into wrong shapes for the future.

The reality is that "We are currently preparing students for jobs that don't yet exist, using technologies that haven't been invented, in order to solve problems we don't even know are problems yet." — former US Secretary

of Education Richard Riley.

Even in traditional roles, teachers and parents can sometimes not visualise the future potential of learners before them.

The British scientist who won the Nobel Prize for medicine this year (2012) was told as a 15-year-old schoolboy that a career in science was "ridiculous". He has won this year's Nobel Prize in medicine for his pioneering work in cloning and stem cells published in 1962. Sir John Gurdon, 79, of Cambridge University was the first person to clone an animal from a single cell and in doing so ignited a slow fuse on the long development of stem cell technology which promises to revolutionise medicine in the 21st Century. Despite a school report suggesting that he should avoid studying science, Sir John said that he owes a great debt of gratitude to the UK for supporting basic scientific research that at the time had no obvious use other than the advance of knowledge. "The work I was involved in had no obvious therapeutic benefit. It was purely of scientific interest. I hope the country will continue to support basic research even though it may have no obvious practical value," Sir John said.

Special issue  
on  
**"Every Child.....  
a Winner"**

Einstein was slow in learning how to speak. His parents even consulted a doctor. He also had a cheeky rebelliousness toward authority, which led one headmaster to expel him and another to amuse history by saying that he would never amount to much. But these traits helped make him a genius. His cocky contempt for authority led him to question

conventional wisdom. His slow verbal development made him curious about ordinary things — such as space and time — that most adults take for granted. His father gave him a compass at age five, and he puzzled over the nature of a magnetic field for the rest of his life. And he tended to think in pictures rather than words.

When the Nobel Laureate in Physics Rabi was asked what made him a Scientist, he did not give the credit to his Science Teacher or the Science Lab, but to his mother, who encouraged him every day to ask a 'good' question.

In a recent talk on TED, Neuroscientist Beau Lotto suggests that Science and children's play have much in common, and that all kids including his 12 year old student Amy O'Toole can do Science.

Life is not about Science only and it is liberal thought, humanities and philosophical dispositions which must also be nurtured in children. When we talk about preserving biological diversity, spending huge amounts in preserving tigers, why do we encourage a desert in learning with the goal for our best children being coaching for IIT, studying at an IIT, then belling the CAT to an IIM then a good job in a multinational. But here comes the 'Kim ascharyam' which the yaksha asks Yudhishtira in the Mahabharata. Having done this path we don't want our children to be the Rajat Gupta's or the Tewari of IIT fame, much less the Shilling and Ted Cryzinski of Harvard fame. But we forget Kabir who said - **'Boya Ped Babool Ka, to Aam kahan se hoye'**.

And several hundred years ago Shakespeare had put it beautifully in Hamlet in Polonius's farewell speech to his son Laertes **"and above all, to thine own self be true...."**.

I think we need to work as a collective, instilling the right values in our children of winning but not at any cost.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

You will be well advised to keep progressing from being a compliant passive learner to an intrinsically motivated self- directed active and reflective learner. You must strive to know the following when it's time to leave school:



- Information Skills
- Grit, Values and Ethics
- Learning to learn, un-learn and re-learn
- Justice, Democracy, Equality and Citizenship

---

### For Teachers



Teachers can help by creating a learning environment that promotes excellence and has the following 11 elements: Enthusiasm, Adventure, Creativity, Reflection, Balance, Compassion, Confidence, Humour, Common Sense, Appreciation and Resilience.

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## For Parents

As a parent, learner dispositions that you need to foster in your children are:

- Curiosity, inquisitiveness and a yearning to learn
- Imagination, Creativity, deep and independent thinking
- Self-aware, self-disciplined, perseverance and determination
- Loving to playing and tinkering with things and ideas
- Emotionally mature, understands emotions: can dialogue between reason and emotion
- Risk taker, problem solver and decision maker
- Empathetic collaborator; multi-sensory communicator



## For Knowledge Workers

Knowledge workers can transform guidance from rhetoric and preaching to algorithms. Like Google, Bing and Yahoo help you in search for data that you seek and is available somewhere on the Internet, and Wolfram Alpha does similar stuff for Mathematics, there is need to match every learner's unique needs to the plethora of open resources and learning tools available in plenty.



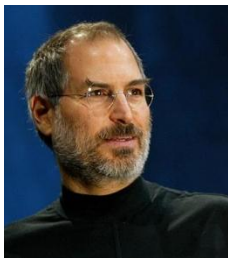
Maybe building on the 2012 Nobel Prize winning work of Alvin Roth and Lloyd Shapely can provide a good starting point.

### Quotes of the Week



***"Not all dreamers are winners, but all winners are dreamers. Your dream is the key to your future. The Bible says that, 'without a vision (dream), a people perish.' You need a dream, if you're going to succeed in anything you do."***

— Mark Gorman



***"Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma - which is living with the results of other people's thinking. Don't let the noise of other's opinions drown out your own inner voice. And most important,***

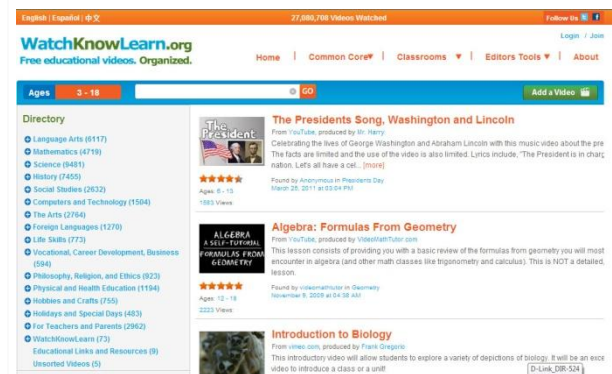
***have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary."***

— Steve Jobs

US computer engineer & industrialist (1955 - 2011)

### Free Resource of the Week

Imagine collecting all the best free educational videos made for children, and making them findable and watchable on one website. Then imagine creating many, many more such videos.



Just think: millions of great short videos, and other watchable media, explaining every topic taught in schools, in every major language on Earth.

Finally, imagine them all deeply and usefully categorized according to subject, education level, and placed in the order in which topics are typically taught. WatchKnow — as in, "You watch, you know"—has started building this resource.

WatchKnow is both a resource for users and also a non-profit, online community that encourages everyone to collect, create, and share free, innovative, educational videos.

<http://www.watchknowlearn.org>

## App of the Week



Concept-mapping and mind-mapping software are used to create diagrams of relationships between concepts, ideas or other pieces of information. It has been suggested that the

mind mapping technique can improve learning/study efficiency up to 15% over conventional note taking. There are many Apps available for this on Android as well as for iOS. Many have suggested that Mindjet is quite a good free App for mind-mapping. Mindjet is a neat iOS app that you may use to create mind maps, capture notes or to brainstorm ideas on your iPhone or iPad. The app was earlier selling in the iTunes store for \$8.99 but, with the upcoming launch of Mind Manager 2012, the mobile app is now available as a free download. Other alternatives to the Mindjet app include MindMeister, iThoughts HD and MindNode.

But feel free to explore others as well and share your experience with us.

<https://itunes.apple.com/us/app/mindmeister-mind-mapping/id291226775?mt=8>

<https://itunes.apple.com/in/app/ithoughtshd-mindmapping/id369020033?mt=8>

<https://itunes.apple.com/in/app/mindnode/id312220102?mt=8>

## Website of the Week

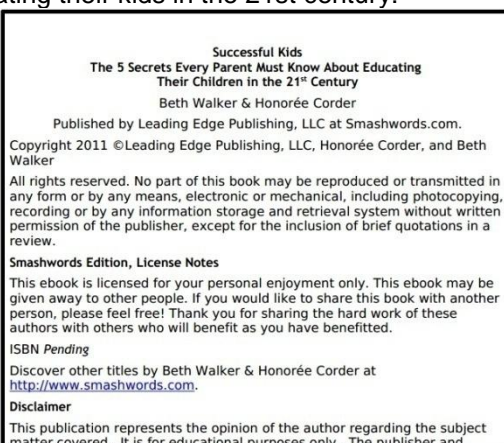
Since the conversation this week is about parents helping their children succeed, I am referring to a very interesting site run by 4 mothers. The iMums are four mothers from different parts of the world dedicated to educating parents about the best digital stories, educational apps, fun games and technology products available for their children. We also offer the latest news in apps for kids, interesting articles, developer interviews, free apps and regular giveaways!



<http://www.theimum.com>

## Book of the Week

The 5 secrets every parent must know about educating their kids in the 21st century:



<http://www.smashwords.com/books/download/90922/1/latest/0/0/successful-kids-the-5-secrets-every-parent-must-know-about-educating-their-kids-in-the-21st-century.pdf>

## Video of the Week

All children can do Science TED Talk by Beau Lotto :



[http://www.ted.com/talks/beau\\_lotto\\_amy\\_o\\_toole\\_science\\_is\\_for\\_everyone\\_kids\\_included.html?utm\\_source=newsletter\\_weekly\\_2012-10-19&utm\\_campaign=newsletter\\_weekly&utm\\_medium=email](http://www.ted.com/talks/beau_lotto_amy_o_toole_science_is_for_everyone_kids_included.html?utm_source=newsletter_weekly_2012-10-19&utm_campaign=newsletter_weekly&utm_medium=email)

## Story of the Week

You would have thought that the following story is from the most backward place of India with a strangulating regulatory body like the AICTE which once proudly used to announce on its website that "no innovative method of education" would be permitted. But this story is from USA the same place where MIT, Harvard, Stanford are opening up their courses to everyone in the world. Do click on the following link

<http://edudemic.com/2012/10/minnesota-bans-coursera-what-you-need-to-know/>

or read a summary right here:

### Minnesota Bans Coursera: What You Need To Know

The future of education is online, open, and robust. That is, of course, assuming that the government thinks it's okay. In Minnesota, users are literally banned from using the popular free online education site Coursera.

Plenty of digital ink has been spilled about this controversial move and I don't intend to act like Edudemic is breaking any news here. Instead, I went through a variety of sources and did my best to uncover the meat and potatoes of what's actually happening. Inside this roundup is a glimpse into what we can all expect at some point in the near future: more controversy as online education becomes increasingly popular. Now that large chunks of money are involved, you can bet this kind of occurrence will start happening on a much larger scale. Very soon. What Happened?

The Slate has a solid recap of what exactly happened:

The Chronicle of Higher Education reports that the state has decided to crack down on free education, notifying California-based startup Coursera that it is not allowed to offer its online courses to the state's residents. Coursera, founded by Stanford computer science professors Daphne Koller and Andrew Ng, partners with top-tier universities around the world to offer certain classes online for free to anyone who wants to take them. You know, unless they happen to be from Minnesota.

A policy analyst for the state's Office of Higher Education told The Chronicle that Minnesota is simply enforcing a longstanding state law requiring colleges to get the government's permission to offer instruction within its borders. She couldn't say whether other online education startups like edX and Udacity were also told to stay out.

Coursera's Updated Terms of Service

### Notice for Minnesota Users:

Coursera has been informed by the Minnesota Office of Higher Education that under Minnesota Statutes (136A.61 to 136A.71), a university cannot offer online courses to Minnesota residents unless the university has received authorization from the State of Minnesota to do so. If you are a resident of Minnesota, you agree that either (1) you will not take courses on Coursera, or (2) for each class that you take, the majority of work you do for the class will be done from outside the State of Minnesota.

**So, how soon can we expect similar guidelines to online education providers by our own MHRD, UGC and AICTE, not to ignore NCTE and Distance Education Council?**



*"The purpose of life is a life of purpose."*

— Robert Bryne

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0018  
29<sup>th</sup> October 2012



## Conversations with Prof. M.M. Pant on 'Matters Educational'



It is becoming clearer by the day, that the primary means of access to the Internet for most learners in the immediate future will be the mobile, tablets and other varieties of handsets. A recent Gartner report on the 10 emerging technologies identifies these as a game changer.

While evangelising the benefits of augmenting a standard classroom experience with collaborative and co-operative learning, one was always on the lookout for the simplest tool with the largest impact. And in this issue we are exploring Twitter as a tool that can very simply bring about a significant transformation to the teaching-learning process.

And the starting point could be to encourage the use of mobiles, tablets and other handhelds in the hands of learners and teachers. No teacher left behind should be the way to go.

We have designed reasonably short half-day programs to help teachers and trainers become adept in using Twitter to augment their traditional teaching or training activity. The program is structured as follows: One session on 'Twitter in the Classroom' which outlines a roadmap for using Twitter to improve Learning, touching upon why and how Social learning improves learning outcomes, getting started and familiarising oneself with Twitter features and terminology followed by activities of using Twitter to augment the Classroom. The theme of the second session of 'Becoming a Better Educator with Twitter' covers Case studies and examples of effective educational usage of Twitter in specific subject teaching of English, Maths, Science, History, Geography as well as for Professional Development.

We may find quite unexpected uses of Twitter as we go long. One could be the integration of story-telling in an academic discourse. When we typically teach a subject in class, we focus on the key concepts and perhaps important applications, but almost sanitise the class from the lives of the knowledge creators in the field. For that they have to read biographies or other reference materials. One very simple way of keeping a class engaged would be to just let the learners imagine what 'tweeting' would have happened if Twitter was available. For example Archimedes could have simply tweeted 'Eureka' instead of jumping from his bath-tub and running around town. And Fermat could have tweeted his famous last theorem to his fellow mathematicians instead of lamenting upon the lack of adequate space in the margin of his note-book. And imagine the impact of Einstein's tweet for his famous mass energy equation  $E = mc^2$ .

Special issue on  
"Twitter for  
Teaching-Learning"

So, it was with great excitement that sometime back I bought the book 'Twitterature' published by Penguin, which is about the world's greatest Books retold through Twitter. Quite amusing and probably the start of a new genre of literature.

This has started to happen, though many don't think it is such a nice thing. 'Black Box' first appeared on Twitter, dispatched from the New Yorker magazine's handle sentence by sentence, one a minute for an hour every evening over a 10-day period. Half-way through the Twitter serialisation, the New Yorker also published Black Box in its entirety in the magazine itself, and now it is also available to read on tablets and smart phones.

So, it seems that the first stage of significant transformation of the classroom would happen with just e-mail, Twitter and a SmartPhone in the hands of all- learners and teachers.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

As a learn you can use Twitter to better learn the subjects that you are studying as part of your studies which may be: English, Maths, Science, History, Geography or any other subject. Here is a link to some stuff for learners of English as a second Language:

<http://www.englishclub.com/learn-english/twitter/index.htm>



### For Teachers



This time, instead of putting it as text, here is a link to a video of less than 5 minutes that is an introduction to how Twitter can help teachers with their professional development.

[http://m.youtube.com/watch?feature=related&v=3tT6N\\_8wcn4](http://m.youtube.com/watch?feature=related&v=3tT6N_8wcn4)

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### For Parents

Some useful information about Twitter that is helpful for parents:



- There is no minimum age to sign up for Twitter. Although technically the user must be of legal age to enter a contract, in practice no proof is required.
- Following is a one-way relationship. Your child may be followed by anyone, quite unknown to your child or you.
- Tweets spread like wildfire. If a user sees a tweet of interest, Twitter encourages "re-tweeting" it. Tweets can, and often do, go far beyond your teen's original group of followers.
- Once posted, tweets can't be edited. Your teen can delete one of her tweets, but she can't change it. And deleting doesn't automatically delete all of the re-tweets that have already been made.
- Tweets can include images and videos. Don't be lulled into security by the 140-character limit of a tweet – tweets can also include links, photos, and videos.
- It's possible to stamp tweets with your location.

Obviously this could be a serious Internet safety risk for teens tweeting from home, school, or a friend's house. Luckily this feature is off by default.

## For Knowledge Workers

For Knowledge workers who have adequate abilities in software development would find many opportunities to develop applications that can build on the Twitter APIs.

<https://dev.twitter.com>



## Quotes of the Week



***"When you are asked if you can do a job, tell 'em, 'Certainly I can!' Then get busy & find out how to do it."***

—Theodore Roosevelt



***"It is utterly false and cruelly arbitrary to put all the play and learning into childhood, all the work into middle age, and all the regrets into old age."***

—Margaret Mead

## App of the Week

If one were to pursue a search for that one App which is useful to all life-long learners, in my view it would have to be **iTunesU**. An entire course in one app.



From the iTunes U app, students can play video or audio lectures and take notes that are synchronized with the lecture. They can read books and view presentations.

## Free Resource of the Week

A very good starting point to get to learn about Twitter is not surprisingly a Wikipedia article :



<http://en.wikipedia.org/wiki/Twitter>

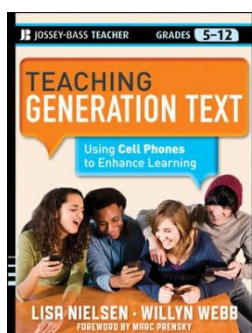
## Website of the Week

All those interested in appreciating the potential of Social Media in the teaching-learning process will find this website very useful with links to several other resources as well :



<http://cybraryman.com/twitter.html>

## Book of the Week



Mobilizing the power of cell phones to maximize students' learning power. Teaching Generation Text shows how teachers can turn cell phones into an educational opportunity instead of an annoying distraction. With a host of innovative ideas, activities, lessons, and strategies, Nielsen and Webb offer a unique way to use

students' preferred method of communication in the classroom. Cell phones can remind students to study, serve as a way to take notes, provide instant, on-demand answers and research, be a great vehicle for home-school connection, and record and capture oral reports or responses to polls and quizzes, all of which can be used to enhance lesson plans and increase motivation:

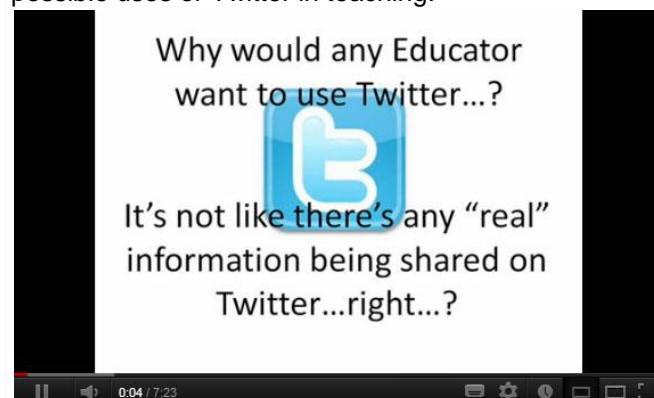
- Offers tactics for teachers to help their students integrate digital technology with their studies
- Filled with research-based ideas and strategies for using a cell phone to enhance learning
- Provides methods for incorporating cell phones into instruction with a unit planning guide and lesson plan ideas

This innovative new book is filled with new ideas for engaging learners in fun, free, and easy ways using nothing more than a basic, text-enabled cell phone.

[http://as.wiley.com/WileyCDA/WileyTitle/productCd-1118076877\\_descCd-buy.html](http://as.wiley.com/WileyCDA/WileyTitle/productCd-1118076877_descCd-buy.html)

## Video of the Week

This week's video is one among many that show the possible uses or Twitter in teaching:



Link for Mobile:

[http://m.youtube.com/#/watch?v=Sy3X9myD6wY&desktop\\_uri=%2Fwatch%3Fv%3DSy3X9myD6wY](http://m.youtube.com/#/watch?v=Sy3X9myD6wY&desktop_uri=%2Fwatch%3Fv%3DSy3X9myD6wY)

Link for website:

<http://www.youtube.com/watch?gl=IN&hl=en&client=mv-google&v=Sy3X9myD6wY&nomobile=1>

## Story of the Week

### The Future of the Story: Twitter and Story-telling

Twitterature (<https://twitter.com/twitterature>), Twiction (<https://twitter.com/twiction>) and Twitlit (<https://twitter.com/Twitlit>) have emerged as coined words in conjunction with Twitter. And we may expect a whole new form of story-telling evolve around Twitter.

While the story of the story evolves from epics to novels to short stories over a long period of time, in a very short time in the recent past many forms of short, really very short story-telling forms are being experimented with.

The most prolific texter of all time might have been Ernest Hemingway. Legend holds the author's proudest work was just six words long: "For Sale: baby shoes, never worn." He allegedly wrote the piece to win a bet—an experiment in and of itself—and it's safe to say no Twitter feed in all its 140-character potency has chirped out anything so powerful.

With just a few words, Hemingway crafted a compliment to the forms of fiction his audience already loved, that he himself had already mastered, and by revealing little, provided much—a prototype should the mainstream desire it.

It seems that five new fiction prototypes exclusive to today's digital era are being explored. They are experimental, so much so that Hemingway himself might not have bet on them. But as the book and novel—the written word itself—fight to maintain a foothold against the swifter and agile media swirling all around them, what could be the ecosystem for the fiction of the future. After all, the millions of individuals on social-networking sites are more than staying



connected with one another—they are reading, writing, editing, distilling, and interpreting the written word more than any generation in history.

In a still evolving field they are being called twitterature, nanofiction, crowd-sourced narratives, infographics, and \$0.00 stories—will we look back on as the catalyst for Storytelling 2.0.

It is interesting to imagine what this leads to? The Haiku in Japanese poetry may also give some inspiration. Six word stories within a Tweet, or a collection of tweets with some rules like those for a Sonnet or maybe something else coming out of neuroscience that tells us how the relevant part of our brain lights up in response to a form of tweet, may become the driver of new forms of literature.

Is the Nobel Prize Committee ready for the new format for its literature prize? Or who knows a future Nobel Peace Prize may go to a person with a lot of Klout who ushered peace with his profound heart and mind changing tweets.

# Overcoming Math Phobia and Becoming Confident in Mathematics

## About the Program

A majority of the population is mortally terrified of anything to do with Mathematics. This irrational fear of one of the most creative expressions of the human mind, is developed very early in the first few years of Schooling. Parents and Teachers often contribute to this. In order to strike at the root of the problem, this program develops an approach to mathematics which overcomes this fear to develop an interest in and appreciation of Mathematics. It instills confidence in tackling Mathematical concepts and problems.

## Duration and Delivery Model

Normal duration recommended is 6 months. That would be learning effort distributed uniformly over about 20 weeks corresponding to an academic semester. For more relaxed learning the course can be spread over one year. For highly motivated learners who can put in the required effort, it can be completed in 3 months. The course contents will be sent to each learner through about 20 e-mails.

## Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "ilovemaths221@gmail.com".



**For any further Information, Contact:**

Prof. M.M. Pant

E-mail: [ilovemaths221@gmail.com](mailto:ilovemaths221@gmail.com)

Cell: +91 - 98100 73724;

Web: [www.mmpant.net](http://www.mmpant.net)

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0019  
5<sup>th</sup> November 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

Join and follow us at Twitter



Given the potential of Twitter, as indicated in the previous issue and the continuous emphasis in all our issues about creating a community that is actively engaged in the future disruptive transformation of education, may we suggest to all readers to create a Twitter account (<https://twitter.com/signup>) and start following 'mmpant'. Also activate notifications when @mmpant sends a tweet and I will start following each of you. We can start following each other. And by the beginning of next year we will have a reasonably sized community of 'Learning 221'. To do so become a member of the list "Learning 221: Exploring the Soul of a Good Education".

## MOOC is no longer a moot point

Today, if you wanted to learn computer programming what options would you consider? Would you join a private institution offering this course, or find a part-time course being offered by a prestigious university, or go online to self-study?



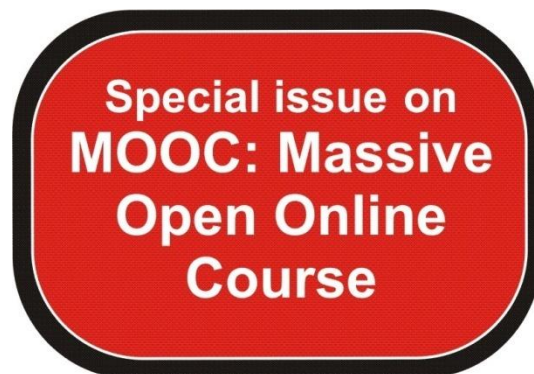
If you go with the third option you would be spoilt for choice.

As a beginner you could go to Khan Academy and take their introductory course on Computer Science, where you would learn JavaScript hands-on using their built-in code emulator (<http://www.khanacademy.org/cs>). Or, you could head to AcademicEarth.org and watch video lectures of the courses taken by Stanford University professors on computer programming (<http://www.academicearth.org/courses/programming-methodology>). Or, you could register for one of the several free courses at Coursera.org (<http://www.Coursera.org>). Or, you could sign-up for a free course being offered by Harvard, MIT and Berkeley at their EdX online learning platform (<https://www.edx.org>). Or, you could take a free course on Udacity (<http://www.udacity.com>) that promises a hands-on, problem based learning experience.

If you choose to go with Coursera, Udacity or EdX, not just for computer programming but for a number of other courses, you would be one of the tens of thousands of students from all over the globe taking that course. That is why these courses are being called MOOCs or Massively Open Online Courses.

The term MOOC was coined by David Cormier and in this 4-minute video he explains what a MOOC is and how it is different from a traditional learning experience - <http://www.youtube.com/watch?v=eW3gMGqcZQc>

In 2008, George Siemens and Stephen Downes conducted one of the first MOOCs. Titled, 'Connectivism and Connective Knowledge' the MOOC was on how knowledge gets constructed in a networked age and how deep learning happens when meaning is co-constructed by a network of connections (learners, knowledge networks, diversity of opinions...). The essence of connectivism is similar to what Seth Godin describes as role of education – not collecting the dots (knowledge nuggets) but connecting the dots. In fact, Siemens' 'Connectivism' is a learning theory for the digital age and is the undergirding pedagogy (or should we say 'webagogy') in MOOCs.



In 2011 professors Sebastian Thrun and Peter Norvig conducted an online course on Artificial Intelligence, which was taken by more than 150,000 students from over 200 countries. This initiative has now transformed into Udacity.

MOOCs seem to be the foundation of the disruption that is emerging in education, which could be described as the 'Eklavya Model of Self-Directed Learning'. In the Indian epic Mahabharata, Eklavya is a tribal prince who aspires to learn archery but is not taken as a student by the famous teacher Dronacharya because he is not of the right lineage. So Ekalvyasculpts a clay statue of the teacher and embarks on a journey of self-learning. MOOCs, taken by teachers who are best in the field, are like virtual Dronacharyas who are there to guide and facilitate anyone who is passionate about learning.

MOOCs are an evolving construct and in every new MOOC the facilitators are trying new experiments – building in tests of recall into the video to make it more cognitively engaging, giving assignments which are then peer reviewed by the community, creating self-study groups, encouraging students to contribute to the course Wiki, catalyzing face-to-face meet-ups among students and so forth.

While MOOCs are excellent for self-learning, as yet they do not provide certification that is recognized by employers or traditional institutes of education. However, it is a matter of time before such informal, self-directed learning becomes more and more acceptable. Already initiatives like Mozilla's 'Open Badges' are experimenting with recognizing informal learning and in future projects and e-portfolios created by students in a MOOC, individually and collaboratively, will become acceptable as evidence of learning and understanding.

The main criticism of MOOCs is that a great learning experience is one which is customized and personalized to the specific needs of a student. However, MOOCs by their very definition are tools of mass education. But this will change.

One change that is already underway is the 'Flipped classroom' – where students 'gain knowledge' using online open educational resources like MOOCs and then use the classroom time with the teacher to dwell into what they did not understand. Integration of learner analytics (check out Khan Academy's learner analytics) that gives details not only about how much time a student spent on the learning resources but also highlights which steps were problematic, goes a long way in helping teachers tackle individual students' problems. In the coming years more insightful learner analytics will become part of MOOCs and make mass customization of education a reality.

So will you use a MOOC to learn computer programming? If lectures and theoretical exercises are not your cup of tea and you really learn when you get your hands dirty then get yourself a Raspberry Pi and an Arduino, or for your kids check out MIT's Scratch initiative, or GameStar Mechanic or Coding Academy, and become part of the fast growing



community of DIY learners. I will leave it to your curiosity to Google these to find out more. Collaborative learning-by-doing is the next disruption in education that is unfolding but more about that in another issue.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

MOOCs are a boon for you. Don't have a good teacher, or don't have a teacher, or don't understand the way your teacher teaches, go search for a MOOC or other open educational resources. Even if the course being offered is of advance level listen to the introductory lectures for each topic. For example, MIT professor Walter Lewin has great lectures on Physics for under-graduates. If you are in school you could listen to the introductory lecture on each topic:



<http://www.academicearth.org/courses/physics-i-classical-mechanics>

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### For Teachers

MOOCs are a great way to keep your knowledge up-to-date. Not only can you participate in the courses to gain knowledge, since there are tens of thousands of participants, you could use MOOCs to gain insights into where students get stuck and use that to enhance your teaching. Also, since the students are from hundreds of countries you could consider organizing physical meet-ups in your city, where you could facilitate the students face-to-face, perhaps for a nominal fee. Of course, you could also consider making your classroom a flipped classroom.



Wikipedia article on Flip Teaching: [http://en.wikipedia.org/wiki/Flip\\_teaching](http://en.wikipedia.org/wiki/Flip_teaching)

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### For Parents

Think of MOOCs as free tuition from some of the world's best teachers. Help your kids identify the right MOOC – to supplement what they are learning in school, or encourage them to participate in a MOOC to gauge their interest in a particular discipline and make an informed choice about what they would like to pursue. For example, ask your children to watch introductory video lectures on psychology, or finance, or economics on sites like AcademicEarth.org to make up their mind about what subjects to choose. You could also use MOOCs to learn what you always yearned for but didn't because your formal education was about learning to earn and not about yearning to learn!



A very interesting 1988 interview of famous science fiction author, Issac Asimov, on his book "As Far as the Human Eye Could See" – he shares his thoughts on future of education (and we are now living this future):

<http://www.youtube.com/watch?v=CJAIERgWhZQ&feature=relmfu>

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## For Knowledge Workers

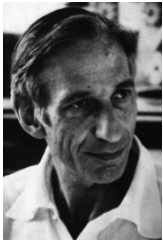
Going has never been so good for self-directed, lifelong learners and it is only getting better. Introspect on how you learn best and then find out learning resources online that suit you most. Or, join a community of practice in your interest area. Or, start your own online learning community, curating MOOCs and other learning resources and catalyzing conversation and collaboration for a deeper learning experience. Such is the long tail of online learning that you can find fellow enthusiasts even in the most niche of topics.



Watch this 4-minute video – Success in a MOOC:

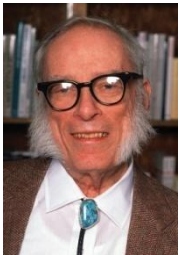
<http://www.youtube.com/watch?v=r8avYQ5ZqM0&feature=relmfu>

### Quotes of the Week



***“A good educational system should have three purposes: it should provide all who want to learn with access to available resources at any time in their lives; empower all who want to share what they know and to find those who want to learn it from them; and, furnish all who want to present an issue to the public with the opportunity to make their challenge known.”***

— Ivan Illich, author, Deschooling Society (1971)



***“When it is time to die there’d be a certain pleasure in thinking that you had utilized your life well, that you had learnt as much as you could, gathered in as much of the universe, and enjoyed it. What a tragedy if you passed through and got nothing out of it.”***

— Issac Asimov (in an interview with Bill Moyers)

### Free Resource of the Week

A detailed presentation on becoming a Knowledge Sommelier – learn the art of curation in education: <http://timelesslifeskills.co.uk/groups/teachers-as-curators>

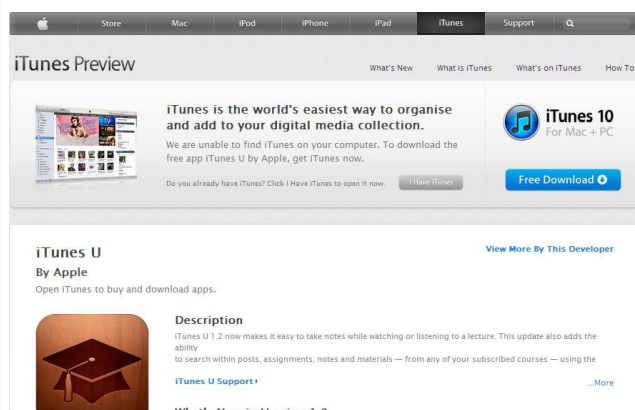
A detailed presentation on augmenting the classroom by supplementing classroom teaching with online conversation and collaboration:



<http://timelesslifeskills.co.uk/groups/augmented-classroom>

## App of the Week

### iTunes University App:



<https://itunes.apple.com/gb/app/itunes-u/id490217893?mt=8>

## Website of the Week

### A website about MOOCs:

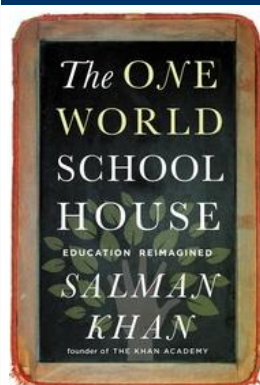


<http://www.mooc.ca/index.html>

TIME magazine issue on 'Reinventing Education' – you can read several articles online, including this one titled "College is Dead. Long Live College" :

<http://nation.time.com/2012/10/18/college-is-dead-long-live-college/>

## Book of the Week



**"The One World Schoolhouse: Education Reimagined" by Salman Khan (Khan Academy)**

In this book Sal shares his strategy for bringing – "a free, world-class education for anyone, anywhere" and explains why he thinks technology will make classrooms more human and

teachers more important. The book is available as an eBook on Amazon.

[http://www.amazon.com/The-One-World-Schoolhouse-Reimagined/dp/1455508381/ref=sr\\_1\\_1?ie=UTF8&qid=1351789213&sr=8-1&keywords=The+One+World+Schoolhouse%3A+Education+Reimagined](http://www.amazon.com/The-One-World-Schoolhouse-Reimagined/dp/1455508381/ref=sr_1_1?ie=UTF8&qid=1351789213&sr=8-1&keywords=The+One+World+Schoolhouse%3A+Education+Reimagined)

## Video of the Week

In this six-minute TED talk Peter Norvig describes the learning from his experience of teaching 150,000 plus students:



[http://www.ted.com/talks/peter\\_norvig\\_the\\_100\\_00\\_0\\_student\\_classroom.html](http://www.ted.com/talks/peter_norvig_the_100_00_0_student_classroom.html)

## Acknowledgement



Once upon a time, all learning was personalised and was to be had 'at the feet of the masters'. More recently, all the 'official' learning happened in 'classrooms' at schools or higher education Institutions. Anything else was unrecognised, informal or distance learning. And classrooms were small in size resulting in the awkward situation that in some Institutions in Delhi, for one course, if you scored less than 100% in the qualifying examination, you could not get admission.

And with the right to education, and the commitment to the Millennium Development Goals, this model will fail because of inadequacy of classrooms and teachers. The only model that can succeed is one of a class-size of 1000 to 10000 and that is what the MOOC has the potential to achieve.

**Atul Pant** has devoted a large amount of time to explore and ponder over the potential of such alternatives.

Atul has drawn up the entire contents of his issue and I am sure will volunteer to do so for a few other forthcoming issues. A very special thanks and appreciation again to Atul for his contribution.

Atul is the founder of [Timeless Lifeskills Limited](http://www.TimelessLifeskills.com), a UK based company providing learning solutions on skills and dispositions essential for thriving in the 21st century. He has authored two books – 'Fire Up the Learner Within – The Art of Self-Directed Learning' and 'Only the Curious Shall Thrive – Strategies for Lifelong Learners to Formulate Insightful Questions'. He is passionate about creating and curating content on life skills (<http://www.Facebook.com/Lifeskills>).

# Learning for Life

## Becoming a Life-long Learner

(including DIY degrees)

### Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "foreverlearning21@gmail.com".

Brought to you by:



# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0020

12<sup>th</sup> November 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

Join and follow us at Twitter



Given the potential of Twitter, as indicated in the previous issue and the continuous emphasis in all our issues about creating a community that is actively engaged in the future disruptive transformation of education, may we suggest to all readers to create a Twitter Account (<https://twitter.com/signup>) and start following 'mmpant'. Also activate notifications when @mmpant sends a tweet and I will start following each of you. We can start following each other. And by the beginning of next year we will have a reasonably sized community of 'Learning 221'. To do so become a member of the list "Learning 221: Exploring the Soul of a Good Education".

[Click here for "How to Create a Twitter Account?" Step by step](#)  
[Twitter For Beginners: Basic Guidelines Before You Start](#)



As I contemplate on present day issues, and the general confusion in opinions and arguments, and as many feel debate and discussions falling to lowest levels ever, I realize that it is actually flowing from a lack of a framework, for want of a better term.

The difficulty is that we have no 'idea' of what we are talking about. Whether it is 'good governance', 'probity in public life', 'fair allocation of public resources', 'justice', 'equity', 'education', 'economic development', 'free and fair elections' or whatever complex idea you choose, the fact is we rush to express our action plan without serious thought.

**Wishing Our  
Learning 221  
Community  
A Very Happy and  
Prosperous Diwali**



Just as modern science and technology has brought into our hands, homes and lives, technologies that till about 50 years were only the concerns of Scientists and Researchers, so also the challenges to the modern world in terms of terrorism, global warming, environmental pollution, unethical or even criminal behaviour among the highly educated is forcing us to ask the big philosophical questions and see that the insights of these great schools of thought are applied to daily life: of nations, of governments, of businesses and of course of individuals, both adults and children.

Medical graduates in their foundation stage have to first study Anatomy and Physiology before they progress to what may be called really 'medical specialisation'. Similarly for a good preparation for the 'School of life' a sound appreciation of Philosophy and a deep understanding (not mere calculating ability, as in its current teaching) of Mathematics is essential.

And this brings me back to the importance of the idea of an idea. How can you ever deal with something of which you have no idea.

So what we need to explore is how do you describe an idea: with a smile, a metaphor, a diagram like a mind-map or a Greek symbol like theta, psi or phi?

And the next step is combining ideas; like a mixture where they retain their features or like a chemical compound resulting in completely new properties. A classic example is water. Hydrogen is combustible, Oxygen is a supporter of combustion, but their chemical compound water puts out fire. So we need a Mathematics, Physics and Chemistry of ideas for solving problems of today and tomorrow.

Matt Ridley in a recent book "The Rational Optimist: How Prosperity evolves" has given to his prologue the title "when ideas have sex" and has a sub-heading in it 'mating minds'. We do say that intellectual progress happens through cross-pollination of ideas. And we have an expression 'Manas putra' to describe that.

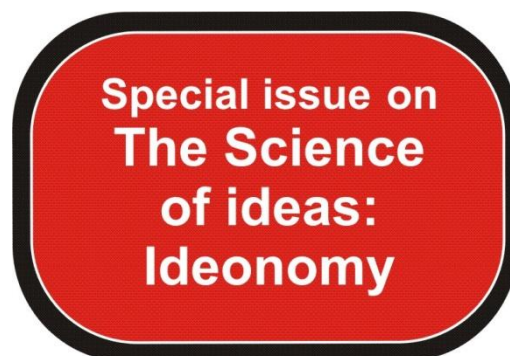
In a future issue I will draw attention to the significance and importance of Mathematics that goes beyond the computing that may have traumatised you in your School.

Let us work towards developing these as a community.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)



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### For Learners

As a student it is helpful if you can classify and categorise the information that you are presented with in terms of facts, which have to be noted or remembered. These are like axioms in Mathematics which are seen as self-evident truths or postulates or assumptions that cannot or have been agreed not to be proved further. Then there may be concepts, principles, procedures and so on. Try to see if you can see the core ideas and the peripheral stuff. Maybe creating mind maps of compound ideas would help you.



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### For Teachers

It will be helpful to your learners, if you can draw attention to the ideas aspect of whatever you are engaging your students with. Although it may not be a mandatory requirement of your Examination Board or your regulatory authority, your learners will be better prepared for the future if they become engaged in ideas.



## For Parents

As parents, you must note that the future is being referred to as the knowledge economy, the innovation economy, the ideas economy and so on. If you want your children to prosper, flourish and thrive in the future, get them to play around with ideas, as they play around with plastic dough or with Lego.

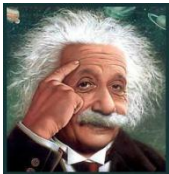


## For Knowledge Workers

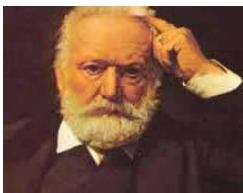
Developing tools for analysing core ideas, by de-constructing compound ideas and then brainstorming for new ideas by combining them, not only as all possible random permutations but actually help in filtering for those combinations that have a contextual relevance. Great opportunities for exploring these.



### Quotes of the Week



***"If at first, the idea is not absurd, then there is no hope for it."***  
— Albert Einstein

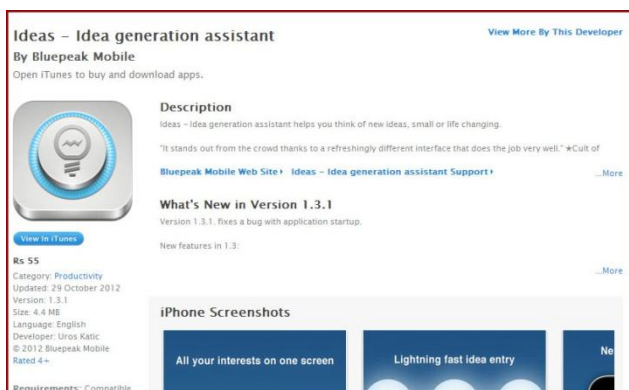


***"There is one thing stronger than all the armies in the world, and that is an idea whose time has come."***

— Victor Hugo

### App of the Week

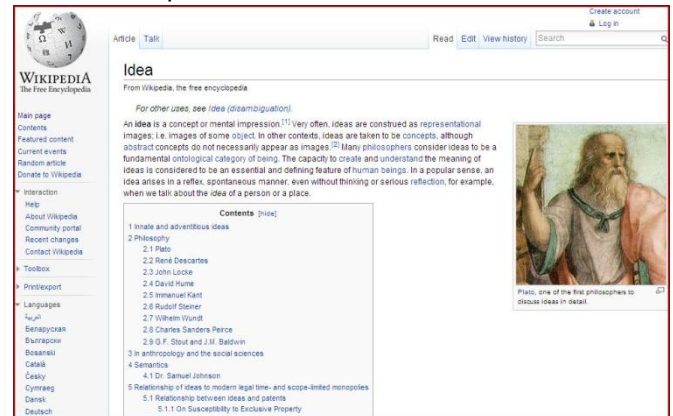
To generate ideas here is an App:



<https://itunes.apple.com/in/app/ideas-idea-generation-assistant/id501342441?mt=8>

### Free Resource of the Week

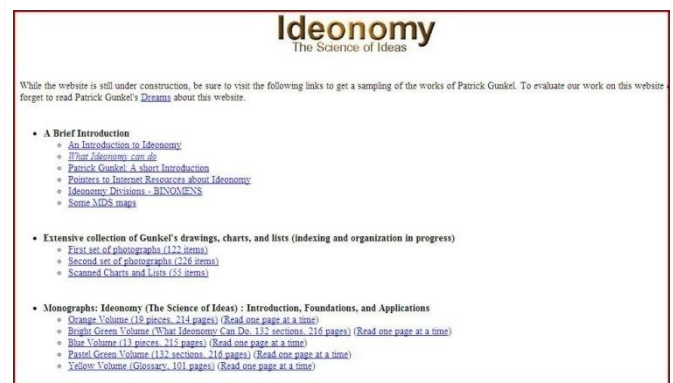
Not surprising, one of the best resources about what an idea is a Wikipedia article referred here:



<http://en.wikipedia.org/wiki/Idea>

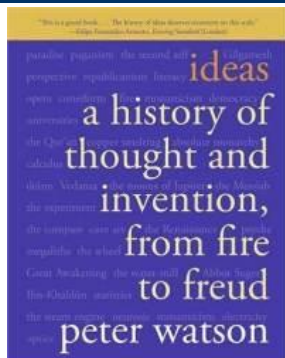
### Website of the Week

Like in many other areas, MIT has a leadership position in developing the Science of ideas. This site has a very comprehensive coverage.



<http://ideonomy.mit.edu>

## Book of the Week



**“Ideas: A History of thought: from fire to Freud” by Peter Watson.**

Peter Watson's hugely ambitious and stimulating history of ideas from deep antiquity to the present day—from the invention of writing, mathematics, science, and philosophy to

the rise of such concepts as the law, sacrifice, democracy, and the soul—offers an illuminated path to a greater understanding of our world and ourselves.

<http://www.goodreads.com/book/show/408204.Ideas>

## Video of the Week

This is a fascinating must watch video, in an interesting format developed by RSAanimate. **WHERE GOOD IDEAS COME FROM** by Steven Johnson.



[http://m.youtube.com/#/watch?v=NugRZGDbPFU&desktop\\_uri=%2Fwatch%3Fv%3DNugRZGDbPFU](http://m.youtube.com/#/watch?v=NugRZGDbPFU&desktop_uri=%2Fwatch%3Fv%3DNugRZGDbPFU)

With “Where Good Ideas Come From”, Steven Johnson pairs the insight of his bestselling *Everything Bad Is Good for You* and the dazzling erudition of *The Ghost Map* and *The Invention of Air* to address an urgent and universal question: What sparks the flash of brilliance? How does groundbreaking innovation happen? Answering in his infectious, culturally omnivorous style, using his fluency in fields from neurobiology to popular culture, Johnson provides the complete, exciting, and encouraging story of how we generate the ideas that push our careers, our lives, our society, and our culture forward.

Beginning with Charles Darwin's first encounter with the teeming ecosystem of the coral reef and drawing connections to the intellectual hyper-productivity of modern megacities and to the instant success of YouTube, Johnson shows us that the question we need to ask is, What kind of environment fosters the development of good ideas? His answers are never less than revelatory, convincing, and inspiring as Johnson identifies the seven key principles to the genesis of such ideas, and traces them across time and disciplines.

Most exhilarating is Johnson's conclusion that with today's tools and environment, radical innovation is extraordinarily accessible to those who know how to cultivate it. *Where Good Ideas Come From* is essential reading for anyone who wants to know how to come up with tomorrow's great ideas.

I am referring here to a very interesting article about the importance of ideas:

<http://www.ccsindia.org/ccsindia/lssreader/41lssreader.pdf>

However for convenience, I am copying the entire article right here:

### **The Importance of Ideas**

**Lawrence Reed**

Years ago as a college professor of economics, I posed a question to each crop of freshman students on or about the first day of class. "Can anyone tell me," I asked, "what determines whether society is organized along socialist, centrally planned lines or as a free enterprise, private property order?" The answer to that query, I suggested, would be the same as the answer to this corollary question: "What causes societies to occasionally change from one economic system to the other?" Rarely would I elicit the response I was looking for, in spite of all the hints I could come up with. The students' answers included the following: "the president," "the Congress," "the news media," "the unions," "the schools." Invariably, someone would suggest there was no determinant at all, that we were talking about mere random, chance events — a kind of irrational and unexplainable ebb and flow of history.

At some point, the guesswork would come to an end and I would reveal the answer I was seeking. "People or the institutions they establish play important roles, but neither one is fundamental enough because neither one explains why people behave the way they do. The correct answer is that which the French author Victor Hugo once called 'more powerful than all the armies of the world'-IDEAS!"

People, such as politicians, activists, clerics, teachers, can often be agents of change, but ideas are the instigators. In shaping public policy—including the larger question of free enterprise or socialism, democracy or dictatorship—ideas are of paramount, decisive importance. What people believe, in other words, says a great deal (maybe everything) about how they behave, for whom they vote, what laws and rules they embrace, what kind of system they'll work to achieve. Change ideas, and you can change the course of history.

Ideas can, indeed, be quite intoxicating, whether they are good ideas or bad ones. They invoke strong passions and spark revolutions. In the last century, we have witnessed first the rise of a world empire committed to the ideas of Karl Marx, followed by its swift dissolution and demise at the "hands" of a more powerful idea—that of freedom and free markets.

The late British economist John Maynard Keynes put it well in 1936 when he wrote, "The ideas of the economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back."

It will not come as a surprise that ideas hostile to liberal principles of limited government, rule of law, and free markets have had dramatic effect for much of the last century. An even more disturbing bit of evidence came from a study a few years ago of network television in America: only 3 percent of businesspeople depicted on television, the Media Institute found, were involved in "socially useful or economically productive" behavior.

The same study reported that more than half of all corporate chiefs on TV committed illegal acts ranging from fraud to murder. And a special PBS program entitled "Hollywood's Favorite Heavy: Businessmen on Prime-Time TV," declared, "By the age of 18, the average kid has seen businessmen on TV attempt over 10,000 murders."

Make no mistake about it—these developments reflect (and even nourish) a body of opinion, a complex of ideas, which at their root are inimical to free markets and private enterprise. They speak volumes about a void in our national economic education. And in a subtle but corrosive way, they have been undermining the philosophical and institutional pillars of our free society. "Ideas," Richard Weaver once said, have consequences!"

The war of ideas being as important as it is, no one can simply afford to ignore it. If whether you live in a command economy or a free society matters to you — and it absolutely does, even if you choose not to think about such



things—then failure to commit time and resources to help shape the climate of opinion around you is short sighted and probably suicidal.

Many think that they are supporting ideas when they fund political parties or candidates. Support for political activity is important in a democracy, but it's also akin to locking the proverbial door after the horse has already left the barn. Politicians usually reflect public opinion; what they can accomplish in office is defined and circumscribed by prevailing majority opinion. If you really want to make a difference and get the maximum bang for your bucks, then you should invest in ideas. Change public opinion, and the politicians will follow.

How does one invest in ideas? Fortunately, a superbly effective vehicle to do that has emerged in recent years—the public policy research institute, or “think tank.” Dozens of them are springing up all over world. They are the futures markets of the idea business — where one can hedge against unfavorable shifts in opinion and policy.

In any event, anyone who suffers from the illusion that ideas are too intangible to matter ought to wake up and smell the coffee. Ideas make all the difference in the world because they create the stage on which all of us perform.

Investing in ideas — the right ones, not just any ideas — is a long-term investment, but one that has a return every bit as tangible as the purchase of stock. If you want to be a player in the idea business, consider investing in the think tank movement, especially those groups committed to the free market. The return on that investment—a stronger, freer society — is the one yield that won't raise your tax bill and will go a long way to assure that your children live as free and prosperous citizens.

The article is adapted from LAWRENCE W. REED's piece in the Corporate Board magazine. (Mr Reed is president of the Mackinac Center for Public Policy in Michigan.)

# THE TRINITY FOR SUCCESS

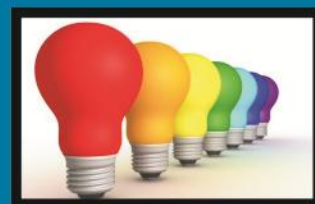
## Decision making, Creativity & Innovation



Decision making



Creativity



Innovation

**For young professionals pursuing success**

### Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to “[successtrinity@gmail.com](mailto:successtrinity@gmail.com)”.

**Brought to you by:**



# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0021  
19<sup>th</sup> November 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

We wish to build a learning community around Learning 221, and while some of us do send e-mail responses, and make comments in person when I happen to meet them, in order to be more engaged, we need to adopt social media tools. One such tool is the blog. I have put the main article here as a blog on '[mmpant.wordpress.com](http://mmpant.wordpress.com)', which I would request you to visit. In due course we will start using the Wordpress blog, the Twitter tweets and of course the e-mail to develop an appropriate model of engagement. Maybe this will evolve into the 'Big Class' model of participatory learning.

Join and follow us at Twitter



Given the potential of Twitter, as indicated in the previous issue and the continuous emphasis in all our issues about creating a community that is actively engaged in the future disruptive transformation of education, may we suggest to all readers to create a Twitter Account (<https://twitter.com/signup>) and start following 'mmpant'. Also activate notifications when @mmpant sends a tweet and I will start following each of you. We can start following each other. And by the beginning of next year we will have a reasonably sized community of 'Learning 221'. To do so become a member of the list "Learning 221: Exploring the Soul of a Good Education".

[Click here for "How to Create a Twitter Account?" Step by step](#)  
[Twitter For Beginners: Basic Guidelines Before You Start](#)



The big buzz this week is how the Diwali release of 2 big Bollywood films are setting a new bar for revenue generation in the region of Rs 200 to Rs 250 crores. One of them was screened at about 2500 screens and grossed around Rs 15 crores in the same period that the other one on about 2000 screens grossed Rs 11 crores. It is of course a neck and neck race. The arithmetic is quite simple. Multiply the number of screens by the number of shows per day multiplied by the size of the hall finally multiplied by the price of the admission ticket. And you know this makes the big stars.

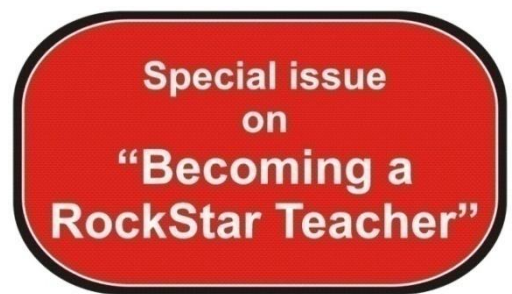
How did this happen? From street corner **nukkad** actors to performing at **Ramlila** and other **leelas** to moving theatre groups to theatres such as Broadway was a long journey. The Indian film industry which is about a hundred years old did not have very well paid artistes for quite some time, because both the production and distribution systems were quite constraining.

And for the first time, we heard of a petition to the competition commission about the stranglehold of the distribution system.

So imagine a world where almost anyone, or a small group of persons could present a story and distribute it to millions of people and somehow get paid for it by every viewer of the story. This is the world that is at the intersection of YouTube, Facebook, Twitter, Garage Band, Movie-maker and so on. You had Justin Bieber, Kolavari D and the recent Gagnam style.

So who would be the beneficiaries of this space. Extremely unlikely as it may seem at first sight, it is educators who will emerge as the next celebrities, after politicians, sportspersons, actors and business leaders.

Did you know that the Physics Professor Walter Levin of MIT has been a number one on YouTube and that too for teaching Physics? Nitin Gupta, an IIT Mumbai alumnus is also very popular, and I have had the opportunity to see him perform live at a recent event at Allahabad. You can see Prof Levin at:



[http://m.youtube.com/#/watch?v=AaALPa7Dwdw&desktop\\_uri=%2Fwatch%3Fv%3DAaALPa7Dwdw](http://m.youtube.com/#/watch?v=AaALPa7Dwdw&desktop_uri=%2Fwatch%3Fv%3DAaALPa7Dwdw)

Another very popular course is one from Gilbert Strang of MIT on Linear Algebra, which is a basic course on matrix theory and linear algebra. Emphasis is given to topics that will be useful in other disciplines, including systems of equations, vector spaces, determinants, eigenvalues, similarity, and positive definite matrices. The number of students registered for this course is about 7.3 million.

Coursera, an upstart company working with selective universities to offer free online courses, had reached one million registered students by August 2012. Another company, Udacity, which also offers what have become known as Massive Open Online Courses, or MOOC's, says it has more than 739,000 students.

As popular as our celebrity Bollywood actor Salman Khan is the Maths teacher Salman Khan of [Khan Academy](http://www.khanacademy.org), which has a library of over 3,500 videos on everything from arithmetic to physics, finance, and history and hundreds of skills to practice, is on a mission to help you learn what you want, when you want, at your own pace.

Let us work towards developing these as a community.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

## For Learners

With so many teachers being available on YouTube, TED, Coursera, EdX, Udemy etc. you are no longer limited to the teaching faculty available at your Institution. You can now learn anything that you want, from any teacher from anywhere in the world. Not only this, the distinction between the roles of learners and teachers is not longer rigid, but with life-long learning it is a continuum. So a learner of one subject or topic, can become a teacher for another one.



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## For Teachers

So, what is a RockStar Teacher? A good teacher explains. The success of a good teacher is seen in the examination results and in the student's success in high stakes test and competitive exams.

A great teacher inspires. The impact of a great teacher is seen in future leaders, who attribute their success in life to the inspirational wisdom that they received from their teachers.



A Rockstar teacher uses 21st century ICT tools to create self-directed learners acting as agents of change, who will transform the world in several different spheres of activities. Their students are achievers, creators, thinkers and innovators, driven by passion and commitment, to make a difference.

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## For Parents

It is now well known that parents have a very significant role in the education of their children. They may not be subject matter specialists, but they are the most knowledgeable about their own child. Developing curiosity, an enquiring mind, the desire to learn are all attributes that parents can develop in their children.



And encouraging their children to pursue learning with the 'masters', who are here labelled as RockStar Teachers, is an important way to do so.

Long years ago, interested and encouraging parents read aloud books that were outside the prescribed curriculum, such as biographies and inspiring stories to their children. Today they can watch together for better bonding as well as learning.

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## For Knowledge Workers

How is a RockStar Teacher trained? Can any knowledge worker migrate to becoming a celebrity RockStar Teacher? In fact here is a great opportunity.

A RockStar Teacher is not trained in a B.Ed type of program in an NCTE approved training Institute. Though having done such a program is not a disqualification. But there would be a significant amount of unlearning and re-learning.



The ideal candidate for being trained as a RockStar teacher would be having a degree in an allied subject, with excellent communication skills and about 5 years teaching experience either in an educational Institute or with private learners.

Those who have never done any teaching before, may find the going a bit difficult and those who have more than 5 years experience of teaching may find themselves somewhat inflexible in their ways, though agility or rigidity is not an attribute of any specific age.

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## Quotes of the Week



***"The mediocre teacher tells, the good teacher explains, the superior teacher demonstrates, the great teacher inspires."***

— William Arthur Ward

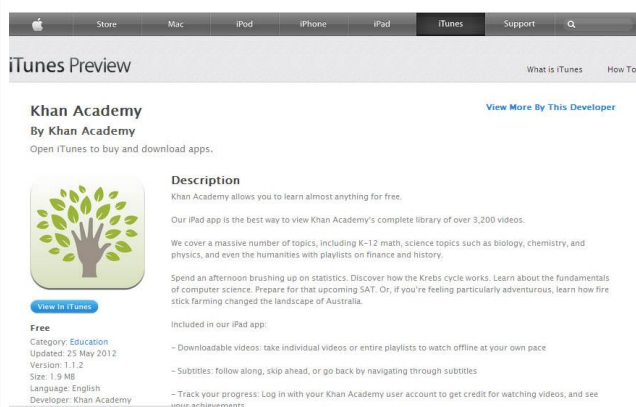


***"A teacher effects eternity; he can never tell where his influence stops."***

— Henry Adams

## App of the Week

The Khan Academy has an app for both the iPad and the Android phone, and is free. More information about the App is available at:



<https://itunes.apple.com/in/app/khan-academy/id469863705?mt=8>

## Free Resource of the Week

YouTube is the new resource base:



Link for Mobiles & Tablets:

[http://m.youtube.com/#/Teachers?uid=sT-Y0dMKWn6\\_3\\_8eNoUdPg&desktop\\_uri=%2FTeachers](http://m.youtube.com/#/Teachers?uid=sT-Y0dMKWn6_3_8eNoUdPg&desktop_uri=%2FTeachers)

Link for Desktops & Laptops:

[http://www.youtube.com/watch?v=NLNuv7jAlhg&playnext=1&list=PLXiCucgdRCLKB4j70x5YFUEMOqgxOWvMk&feature=results\\_main](http://www.youtube.com/watch?v=NLNuv7jAlhg&playnext=1&list=PLXiCucgdRCLKB4j70x5YFUEMOqgxOWvMk&feature=results_main)

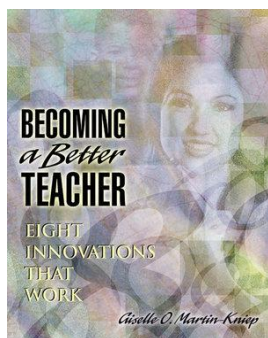
## Website of the Week

You didn't believe that there could actually be a site after RockStar Teachers. Well, here it is :



<http://www.teachlikearockstar.com/reviews/>

## Book of the Week



**“Becoming a Better Teacher: Eight Innovations That Work” by Giselle O. Martin-Kniep.** This book eight innovations that support a student-centered classroom, including curriculum integration, authentic assessment, and portfolios.

[http://www.flipkart.com/becoming-better-teacher-0871203855/p/itmcyypzt9cxp9hu?pid=9780871203854&ref=2f90dd77-badb-479d-a207-2176f513e78f&srno=s\\_2&otracker=from-search](http://www.flipkart.com/becoming-better-teacher-0871203855/p/itmcyypzt9cxp9hu?pid=9780871203854&ref=2f90dd77-badb-479d-a207-2176f513e78f&srno=s_2&otracker=from-search)

## Video of the Week

This week's video is about millionaire teachers who teach English in Korea. This was possible because Internet is most easily available there. Once a similar thing happens in India, there will be some teachers here, who will earn more than film stars. Watch this video:



Link for Mobiles & Tablets:

[http://m.youtube.com/#/watch?v=XbnwleOxB4E&desktop\\_uri=%2Fwatch%3Fv%3DXbnwleOxB4E](http://m.youtube.com/#/watch?v=XbnwleOxB4E&desktop_uri=%2Fwatch%3Fv%3DXbnwleOxB4E)

Link for Desktops & Laptops:

<http://www.youtube.com/watch?v=XbnwleOxB4E>

## Story of the Week

I found a link to an interesting story on what a celebrity teacher would be like:

<http://oldschoolteach.wordpress.com/2011/04/09/if-teachers-were-treated-like-stars-a-short-story/>

But my view is that this will be reality in about a decade from now. Best of luck to budding RockStar Teachers.

For convenience, I am copying the story here also:

### If Teachers Were Treated Like Celebrities! A Short Story...2012 version

Posted April 9, 2011 by Oldschoolteach in Blogging about Education:

Can you imagine what it would be like if teachers were treated like actors, athletes, singers, or even “reality TV stars?” Wow!

Mrs. Smith, Celebrity Teacher

“Mrs. Smith, Mrs. Smith, can I get your autograph?” She turned and smiled brightly at the young woman running towards her.

“Mrs. Smith”, the young woman gasped, “I have been following your career for years! I’m about to start teaching myself, and I would be honored if you signed my copy of your book.”

“Are you ready to teach, young lady?” she asked as she scribbled her signature, “This is a difficult job.”

“I know it is, but I’ve been reading your books, watching your videos, and listening to your podcasts, I know I’m ready!”

“Good luck”, she says as she handed her the book. “Take care, you have quite a journey ahead of you.”

Mrs. Smith and her husband entered the Four Seasons and were immediately seated at the best table. The maitre d' smiled, and thanked Mrs. Smith, again, for teaching his son when she taught at Tower Hill.

"Anything you need Mr. and Mrs. Smith, just ask."

After dinner, Mr. and Mrs. Smith hopped into their Mercedes and drove home to their ten bedroom house up in the hills. They entered their home, and stopped to pick up one of the cameras left by the crew from MTV Cribs-Teachers.

"Time to mark some papers honey, I'll be upstairs in a bit."

She sat down, stared out at the ocean, and began grading. The phone rang, and her assistant teacher, Marjorie spoke excitedly.

"Mrs. Smith, Oprah wants another interview, she's doing another special on teachers, it's called "Teachers are Tenacious!" She's going to give away prizes to every school where the teachers in the audience work!"

"Oh, that Oprah, she is something else! Set it up please, Marjorie."

She hung up and the phone rang again.

"Oh, my gosh, Mrs. Smith, you've been nominated for a Thackeray!" (Named after Sidney Poitier's character in, "To Sir, With Love")

"A Thackeray?! Are you kidding? Oh my gosh, I've always dreamed...! What category?"

"Best Lesson Taught During an Unannounced Observation."

The Thackerays

As teachers walked down the red carpet, former students and teachers screamed their names. Reporters rushed up to interview each teacher as they strode down the carpet.

"Mrs. Smith, what are you wearing?"

She waved, "This is not about me, it's about all those kids I've helped!"

And the Winner Is...

And the winner of the "Best Lesson Taught During an Unannounced Observation" is... Mrs. Smith!"

She ran on the stage, "First I'd like to thank God." Next I want to thank all those students who gave me the opportunity to teach. I'd also like to thank my mentor teacher, Mr. Wilson. He made me the teacher I am today! And most of all, my Mom and Dad, who gave me the chance to go to college and become what I am today, a teacher!"

The applause filled the room, and everyone stood, chanting "Teachers, teachers, teachers!"

I know we all don't need a Mercedes, a ten-bedroom home, to be filmed by MTV, or have an overrated awards show. But wouldn't it be great if teachers were respected as much as actors, athletes, singers, and yes, even "reality" tv stars?



***"No school can supply an anti-liberal education, or a fascist education, as these terms are contradictory. Liberalism and education are one."***

— George Seldes

Brought to you by:



# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0022  
26<sup>th</sup> November 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

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[Click here for "How to Create a Twitter Account?" Step by step](#)  
[Twitter For Beginners: Basic Guidelines Before You Start](#)





### What do we really mean when we use the word “learn”?

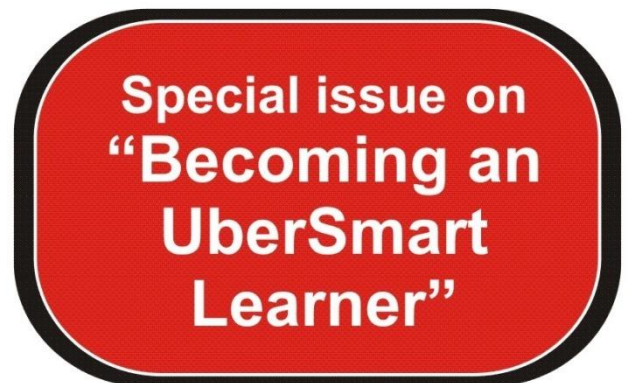
It is something we all do from the moment of birth, so most of us likely take this very complex process for granted.

How many of you have spent time trying to understand the meaning of learning, or how it occurs?

Although many of us have a general sense of what it means to learn, there are often many assumptions involved.

Teachers often assume that, because they are “teaching,” students must be learning. Students assume that, because they have read their text and memorized facts, they have learned something.

- How do we know that the desired learning has happened?
- What are the roles of students and teachers in the learning process?
- Are certain kinds of learning and thinking more valuable than others?
- Are learners acquiring shallow learning, deep learning or profound learning?
- What does sophisticated thinking look like and what are the developmental stages for getting there?
- What kinds of skills and knowledge do employers desire in their prospective employees?
- How do grades reflect a student’s thinking and learning?
- What role does a good quality education play in modern society?



These are but a few questions to consider while reflecting on the purpose of a proper education.

Let us work towards developing these as a community.

I look forward to your support in building this community. Please do forward this to your network by clicking the “**forward to a friend**” button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

The modules a program for learners to make them a better learner could cover the following:

- Overcoming Procrastination and effective time management for better learning: Developing Good Study Habits.
- Learning to read (with comprehension) then reading to learn.
- Improving your retention and recall (memorisation) skills.
- Getting Sleep to work for you: the power of the sub-conscious mind.



- Creating your own info-graphics for better learning.
- Examinations: Preparing for them and achieving high grades/marks.

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### For Teachers

Teachers have an important role in developing an interest and desire to learn and they could encourage their learners to:



- Use the Internet and resources available through it to become a better learner.
- Learning with Social Media.
- Understanding concepts with mind-maps.
- Using webquests for formulating good questions and finding answers.
- Putting it all together: How to be able to learn anything?

---

### For Parents

Parents need to address the following issues:



- Why are you under-performing? Understanding the Study and Exams Game
- First things first: profiling yourself as a learner: strengths and weaknesses
- Setting up your study environment, organising your study materials and learning tools.
- Getting motivated: from extrinsic motivation to intrinsic motivation

---

### For Knowledge Workers

Once in the workplace, it is still a journey of continuous learning:



- Take charge of your learning: Developing a Personalised learning Plan.
  - Setting SMART Goals.
  - Becoming a self-directed learner.
  - Reflecting upon one's learning: Appreciating different strategies for different subjects.
  - Kemba Kaizen and Anuvrat: Cumulative improvement in small achievable steps.
-

## Quotes of the Week



***“There are no secrets to success. It is the result of preparation, hard work, and learning from failure.”***

— Colin Powell



***“Learning should be a joy and full of excitement. It is life's greatest adventure; it is an illustrated excursion into the minds of the noble and the learned.”***

— Taylor Caldwell

## App of the Week

**Evernote** (<http://evernote.com>) [Free for iPhone and Android]: Ever wanted to note something down and not had access to a paper and pen? Your phone probably already has an inbuilt note-taking function, but Evernote provides so much more.

**EVERNOTE** PRODUCTS | NOTEWORTHY BLOG | THE TRUNK

Remember everything.

**Capture anything.**  
Save your ideas, things you like, things you hear, and things you see.

**Access anywhere.**  
Evernote works with nearly every computer, phone and mobile device out there.

**Find things fast.**  
Search by keyword, tag or even printed and handwritten text inside images.

GET EVERNOTE, IT'S FREE

You can attach images and audio to your notes, add your location and search through your notes for keywords at the click of a button (including text that appears in images). This means you can take photos of class handouts, search for keywords in the handout image, write your own summaries, carry your notes on your phone for viewing at any time and sync them with your computer — the possibilities are endless.

## Free Resource of the Week

The resource this week is. Nano-learning object. An infographic.

Infographics are a great way of putting together a lot of data or facts on a single page, slide or poster. Here is one summarising the key skills in a 21st Century learner:

**Educational Technology and Mobile Learning**  
A resource of free educational web tools and mobile apps for educators

Home | Teacher Guides | Google Tools | Video Tools | Teachers' Slides | Infographics | Great Books | Contact Me | About Me | Advertise Here

**WizIQ Virtual Classroom**  
Complete solution for online teaching  
Sign up for Free Trial and Explore

Ads by Google | Classroom Posters | Learning | Physics Education | Physics Course

**A MUST HAVE POSTER ABOUT 21ST CENTURY LEARNING SKILLS**

educational posters, my favorites | Med Khatabi

I have just finished working on a graphic that I have made specifically for readers of Educational Technology and Mobile Learning (of course anyone else is allowed to use it). I am not the kind of guy to ask for favors in return for freebies I publish here. I honestly hate it and I have seen this practice in different blogs and websites. They tell you you can for instance download a certain PDF or eBook for free provided you register with them using your email or to like them on Facebook, etc. I would understand it from bloggers outside the educational arena but I can not swallow it when I see someone claiming to be an educator committed to the cause of education and yet providing such kind of services.

Search This Blog  
Google Custom Search

Connect with the  
Facebook | Twitter | Google+ | LinkedIn

**Activities for Classrooms**  
Collaborate with students globally: Join the ePals Global Community!  
[www.ePals.com/Join](http://www.ePals.com/Join)

<http://www.educatorstechnology.com/2012/11/a-must-have-poster-about-21st-century.html>

## Website of the Week

This website has links to 15 resources to make one a better self-learner:

**edudemic** Featured Articles | Most Popular | Trending Topics

HOME | TOOLS | TRENDS | NEWS | HOW TO | ONLINE LEARNING | SOCIAL MEDIA | ADVERTISE | IPAD MAGAZINE | APP DIRECTORY | ONLINE COLLEGE GUIDE

**Activities for Classrooms** Collaborate with students globally: Join the ePals Global Community! [www.ePals.com/Join](http://www.ePals.com/Join)

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25 Ways Teachers Can Connect More With Their Colleagues  
How Learners Are Like Cats →

**15 Ways To Become A Better Self-Learner**  
Topic: guide, How To, learning, Trends

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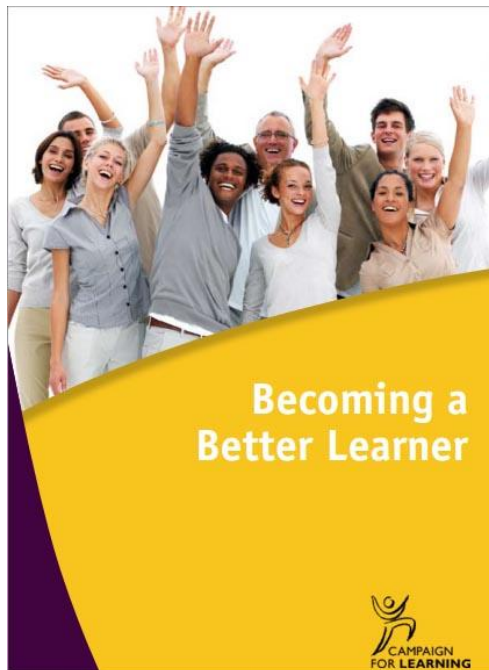
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Program:

<http://edudemic.com/2012/06/15-ways-to-become-a-better-self-learner/>

## Book of the Week

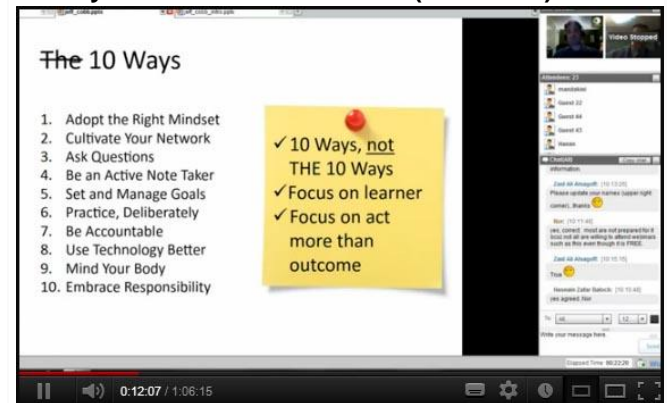
This 24 page free booklet is a great resource for becoming a better learner :



<http://www.campaign-for-learning.org.uk/cfl/assets/documents/OtherDocuments/Becoming%20a%20better%20learner.pdf>

## Video of the Week

### 10 Ways to Be a Better Learner (Jeff Cobb)



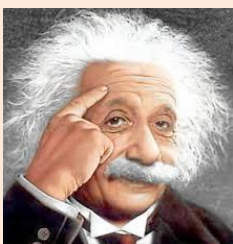
"In this talk, Jeff Cobb explores 10 Ways to Be a Better Learner, which was inspired by his work on the Mission to Learn blog, and consulting experience. Many of us simply weren't all that well prepared by traditional schooling to handle the massive flow of information and the continual need for upgrading our knowledge and skills that are demanded by the "learning economy" in which we now live.

[http://m.youtube.com/#/watch?v=gAz\\_UKWUfR4&desktop\\_uri=%2Fwatch%3Fv%3DgAz\\_UKWUfR4](http://m.youtube.com/#/watch?v=gAz_UKWUfR4&desktop_uri=%2Fwatch%3Fv%3DgAz_UKWUfR4)

## Story of the Week

In this issue we connect you to a link about 'learning stories' by Susan Hill:

<http://www.unisanet.unisa.edu.au/staff/SueHill/Learningstories.pdf>



*"A man's ethical behaviour should be based effectually on sympathy, education, and social ties and needs; no religious basis is necessary. Man would indeed be in a poor way if he had to be restrained by fear of punishment and hope of reward after death."*

— Albert Einstein

Brought to you by:





# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0023  
3<sup>rd</sup> December 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

We wish to build a learning community around Learning 221, and while some of us do send e-mail responses, and make comments in person when I happen to meet them, in order to be more engaged, we need to adopt social media tools. One such tool is the blog. I have put the main article here as a blog on '[mmpant.wordpress.com](http://mmpant.wordpress.com)', which I would request you to visit. In due course we will start using the Wordpress blog, the Twitter tweets and of course the e-mail to develop an appropriate model of engagement. Maybe this will evolve into the 'Big Class' model of participatory learning.

Join and follow us at Twitter



Given the potential of Twitter, as indicated in the previous issue and the continuous emphasis in all our issues about creating a community that is actively engaged in the future disruptive transformation of education, may we suggest to all readers to create a Twitter Account (<https://twitter.com/signup>) and start following 'mmpant'. Also activate notifications when @mmpant sends a tweet and I will start following each of you. We can start following each other. And by the beginning of next year we will have a reasonably sized community of 'Learning 221'. To do so become a member of the list "Learning 221: Exploring the Soul of a Good Education".

[Click here for "How to Create a Twitter Account?" Step by step](#)  
[Twitter For Beginners: Basic Guidelines Before You Start](#)



While we often associate learning as something that is closely associated with going to School, the fact is that a child learns independently and at a very rapid pace even in the years before entering school. And as far as the cognitive abilities of a child are concerned and perhaps even a large part of the personality, it is developed in the early years.

In fact, it has been said that “the womb is also a class-room”. Inside the womb:

- The fetus brain develops from 6-9 weeks of the pregnancy period.
- It develops with the same pace as it develops over the period of next eight months.
- The fetus has the capability to learn during this period and you

can teach various sounds, smells, tastes etc.

- The child can listen to the sounds especially of his mother.
- Can even smell the body odor of the mother
- Prefer things that mother preferred during their pregnancy.

The Early Years Foundation Stage (EYFS) is part of the UK Government's wider scheme, laid out in the Children's Plan and Every Child Matters, to give all children the best possible start in life.

Introducing statutory standards for childcare for 0- to 5-year-olds gives every child the right, regardless of their background, to play, have fun and develop safely when they are looked after outside of their home. It means that parents can relax, safe in the knowledge that their children will get the same excellent standards of learning and care, regardless of the type of setting they attend.

At the heart of the EYFS is the principle that young children need to play in order to have fun, make friends and to begin to learn and understand about the world around them. The EYFS is a play-based framework that acknowledges that every child is unique and they learn and develop at different rates and in different ways.

The media pack, available for download at:

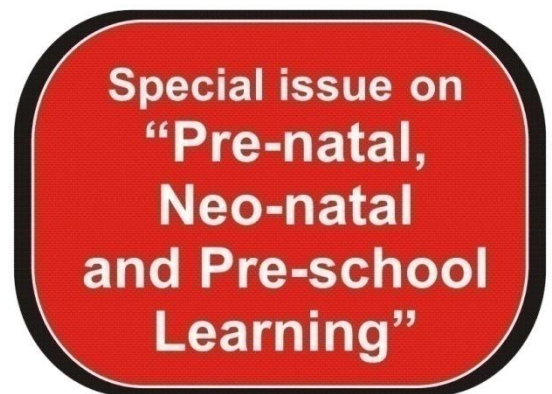
<https://www.education.gov.uk/publications/standard/Nurseriesplaygroupsandreceptionclasses/Page1/D16-7781-0808>, provides useful information on the EYFS, and includes case studies and detailed early learning goals.

Let us work towards developing these as a community.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)



## For Learners

At this stage, the learners themselves have little role in organising or reflecting upon their own learning; and of course can't read this newsletter. So this issue tries to provide information that is relevant and useful for teachers, parents and grand-parents. But not for the pre-schoolers themselves.



---

## For Teachers

Pedagogical considerations advise against formal teaching in the pre-school and early school stage. But development in learning and cognitive abilities happens at a very rapid rate at this stage.



The EYFS is based on four principal themes:

- **A unique child** – every child is a competent learner from birth who can be resilient, capable and self assured.
- **Positive relationships** – children learn to be strong and independent from a base of loving and secure relationships with parents/carers.
- **Enabling environments** – the environment plays a key role in supporting a child's development.
- **Learning and development** – children learn and develop in different ways and at different rates. All areas of learning are equally important and interconnected.

---

## For Parents

There is a lot of concern about how early should a child be allowed to be watching screens on Television or iPads. A presentation by Spencer Kelly on the BBC show 'Click' on Sunday 25th November 2012, showed overwhelming evidence that children under the age of 3 should not spend significant times in front of an engaging screen. Countries such as France, Canada and Australia are advising parents against. In contrast UK actually encourages it.



In the 69 parameters laid down in the EYFS, an important one is: "Find out about and identify the uses of everyday technology and use information and communication technology and programmable toys to support their learning".

The jury is still out on the issue, but many persons think that heavens won't fall, if until the age of 3, children are exposed to books and have stories read out to them from Kindle or other devices by their parents.

---

## For Grand Parents

Some time back, a report was published in a leading newspaper stating that the times then a person is most happy is when he or she is 9 years or 68 years old. It was also commented that this is probably the reason that grand-parents and grand children connect well. But grandparents play a very crucial and critical role. However for this purpose, they will have to be familiar with the new access devices and tools and technologies.



As a start, it would be useful for grandparents (and also for some parents) to become familiar with Tablets for Android and the iOS.

As a start, we have designed a program with the title '**iPad for Senior Citizens**'. The program covers : An introduction to your iPad, your life-long companion

- **Stay up-to-date with your iPad:** reading news, magazines, books, blogs and more.
- **Stay connected:** Sending and receiving e-mails on your iPad.
- **Stay engaged:** Surfing the web with Your iPad - tips and Tricks
- **Stay entertained:** Photos, Music and Videos on your iPad.
- **Stay healthy, wealthy, wise and happy:** apps for health, finance, hobbies and spirituality
- **Exploring more on your own:** Books, Tutorials and other resources.



## Quotes of the Week



***"A newborn baby has only three demands. They are warmth in the arms of its mother, food from her breasts, and security in the knowledge of her presence. Breastfeeding satisfies all three."***

— Grantly Dick-Read



***"Before I was married I had six theories about raising children. Now I have six children and no theories."***

— John Wilmot,  
Earl of Rochester

## App of the Week

One very useful App for parents of very young children, is of course on parenting. The link for the magazine 'Parents' and for downloading its App is here:

**Monkey Preschool Lunchbox**

Introduce your preschooler to letters, colors, shapes, counting, and pattern recognition. The goal of the game, through six different activities, is to fill a monkey's lunch box with fruit. Your child will have fun helping the monkey count fruit, match cards with fruit on them, and solve puzzles. When a few activities are won in a row, kids can choose a cartoon sticker and place it on a personalized virtual canvas board. (\$0.99, iPhone, iPad; \$1.99, Android)

- Download Monkey Preschool Lunchbox on iTunes
- Download Monkey Preschool Lunchbox on Android Market

<http://www.parents.com/fun/entertainment/gadgets/best-apps-for-preschoolers/>

## Free Resource of the Week

This document can be of great help in dealing with curriculum aspects of pre-school learning :

[http://www.deni.gov.uk/preschool\\_curricular-2.pdf](http://www.deni.gov.uk/preschool_curricular-2.pdf)

Another very useful site is :

**AS SEEN ON Rachael Ray**

**babyplus** PRENATAL EDUCATION SYSTEM®  
When learning begins

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The Science of BabyPlus

What is Prenatal Learning?

Every mother knows that her child's physical development begins during the crucial prenatal months. Taking a prenatal vitamin to enrich a child's nutritional environment is the standard-of-care for providing an optimal environment during a child's earliest physical development. It is widely accepted that a child's learning ability begins during those very same prenatal months. Educators, scientists, criminologists and physicians alike have long ago acknowledged the vital importance of a healthy and enriched prenatal environment as it pertains to the long term development and learning ability of a child. An age-appropriate prenatal curriculum strengthens a child's ability to learn during the developmental period when the advantages will be most significant for the child.

In the prenatal months, the brain is at its most receptive stage of learning. The prenatal baby's hearing is fully developed by the 18th week of pregnancy. Independent studies have demonstrated that, for the duration of the pregnancy, the baby can actually compare and contrast sounds made by its mother's voice with sounds heard during the prenatal period.

What Professionals Say

Historical Basis  
Scientific Basis  
Tech Papers  
Independent Clinical Trial  
Technical Bibliography  
Media Bibliography  
BabyPlus In The News  
Ever Wonder Why?  
Musical Products  
Similar product comparison  
Sweet Baby  
Dr. Brent Logan

See BabyPlus® in action

► Learn how it works

► Click here to listen

Live Help  
FREE chat by Volusion

► Customer Support

What BP Families Have to Say

<http://www.babyplus.com/prenatallearning.php>

## Website of the Week

This is a very helpful site for information on pre-school learning :

**Practical Pre-School** Sheffield Hallam University

Want to start, develop or change your career?

Magazine | Books | Gold Awards | Contact us

**Welcome to Practical Pre-School**

Practical Pre-School publishes an essential magazine, books and resources for anyone working with children in the early years.

**Practical Pre-School, incorporating Child Care**

Practical Pre-School, incorporating Child Care contains expert information, inspirational activity ideas and easy-to-use practical resources to help you deliver outstanding education and care for young children. It combines two separate and distinct magazines: Practical Pre-School and Child Care, in one incredible resource.

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**Practical Pre-School Books**

Publishers of essential resources for the early years. Designed specifically for early years practitioners, managers, students and children.

The Early Years Foundation Stage in practice

The Early Years Foundation Stage in practice

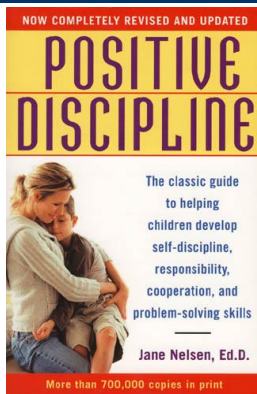
Is your must-have guide to the revised EYFS

Click here

<http://www.practicalpreschool.com/>



## Book of the Week



**"Positive Discipline"** By Jane Nelsen: Caring for young children is one of the most challenging tasks an adult will ever face. No matter how much you love the child, there will be moments filled with anger, frustration, and even desperation. There will also be questions: Why does my child deliberately lie to me? Why won't she listen to me?

Should I ever spank her when she is disobedient?

Now completely updated to report the latest research in child development, Positive Discipline for Preschoolers will teach you how to use kind but firm support to raise a child who is responsible, respectful, and resourceful. You'll find practical solutions on how to: prevent misbehavior through non-punitive discipline—not punishment and many other very helpful and useful tips.

[http://www.flipkart.com/positive-discipline-0345487672/p/itmccz38zueadgp6?pid=9780345487674&ref=c07cf12b-8e64-43d2-99b5-775d8428dc64&srno=s\\_1&otracker=from-search&query=Posotive%20Discipline](http://www.flipkart.com/positive-discipline-0345487672/p/itmccz38zueadgp6?pid=9780345487674&ref=c07cf12b-8e64-43d2-99b5-775d8428dc64&srno=s_1&otracker=from-search&query=Posotive%20Discipline)

## Video of the Week

### What do babies think?

This is a very interesting video with some great insights, coming out of observation and research. It suggests that babies are actually our research department, while we grown-ups are marketing, sales and administration.



[http://www.ted.com/talks/alison\\_gopnik\\_what\\_do\\_babies\\_think.html](http://www.ted.com/talks/alison_gopnik_what_do_babies_think.html)

**Useful for all ages: School to Adults**

**Instant Content Search**

**LIVE Learning Guidance**

**Mastering Maths Program**

**Voice Support In English, Hindi & Regional Languages**

**Programs for Employability**

**English Language Learning Suites**

**Learning 221**

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0024  
10<sup>th</sup> December 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

We wish to build a learning community around Learning 221, and while some of us do send e-mail responses, and make comments in person when I happen to meet them, in order to be more engaged, we need to adopt social media tools. One such tool is the blog. I have put the main article here as a blog on '[mmpant.wordpress.com](http://mmpant.wordpress.com)', which I would request you to visit. In due course we will start using the Wordpress blog, the Twitter tweets and of course the e-mail to develop an appropriate model of engagement. Maybe this will evolve into the 'Big Class' model of participatory learning.

Join and follow us at Twitter



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[Click here for "How to Create a Twitter Account?" Step by step](#)  
[Twitter For Beginners: Basic Guidelines Before You Start](#)



**Marc Prensky** in an article:

<http://www.marcprensky.com/writing/prensky%20-%20digital%20natives,%20digital%20immigrants%20-%20part1.pdf>

identified the young as digital natives and the older as digital migrants. But a recent survey by a sweet brand Juicy Drop Pop led to the conclusion that the ages at which people enjoy their life the most are 9 and 68. Researchers found that these two years are the precise ages in life where people are most likely to throw caution to the wind and have the most fun.

"The results cement the idea of a special bond that we so often see between grandparents and grand-children," said psychologist Susan Quillam to The Telegraph. "Each is at a stage in their life when they are discovering or - in the grandparent's case - rediscovering the boundaries by which most of us live our lives."

And since kids have a lot of fun with their iPads and iPhones, I thought that it would be a good idea to produce a program that introduces the iPads to senior citizens. Initially I had thought of using the phrase "Visa on Arrival for Digital Migrants", but was not sure that it would be readily understood.

While it is commonly known that the Internet is a great source of information and tools like e-mail and chat that make it easy to communicate, doing so with desktops or even laptops was rather cumbersome and difficult. This new technological advancement in the form of iPads or the latest iPad-mini has made it much easier for seniors to navigate the web, do video chats, and other technological Marvels. It is important that everyone know how to use the most modern communication devices. The iPad for seniors has made the break through much easier for that age group.

The large buttons has made it easier for a senior to use the keypad and since the iPad fills the screen it has made the iPad much more manageable. When you have large fingers or stiff fingers and your dexterity is not adequate then you will enjoy being able to use the iPad. The touch screen technology adapts to the user no matter what size or shape their fingers might be. When this happens then of course, the intimidation is eliminated making it much easier for anyone to interact with computer.

We are doing the first such event on Sunday 9th December, and have been requested to such an event for a group of Senior Citizens in west Delhi in January. Very soon we hope to evolve into a vibrant community of interested and interacting minds pursuing common goals and interests, while staying geographically dispersed.

The user can carry the iPad just about anywhere and use it at their convenience. It is handy to use the iPad while sitting on an armchair or on the sofa. You can have your iPad in your purse and use it while you are shopping or visiting your friends. There are so many ways that you can use your iPad and feel comfortable while you are doing it.

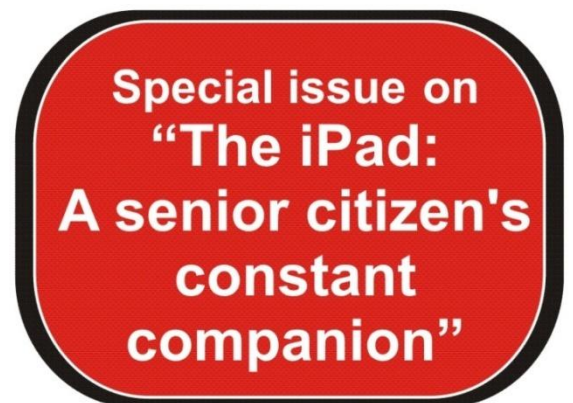
Many seniors have found that the iPad has been very beneficial in providing them a means to stay in contact with their family and friends from the comfort of their own home. The ease of use has made the iPad user friendly to seniors of all ages.

Let us work towards developing these as a community.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)



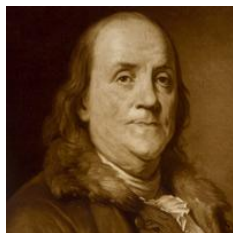


## Quotes of the Week



*"Everywhere I have sought rest and found it not except sitting apart in a nook with a little book. [Lat., In omnibus requiem quaesivi; Et non inveni; Nisi seorsim sedans; In angulo cum libello.]"*

— Thomas A. Kempis



*"For the want of a nail the shoe was lost, For the want of a shoe the horse was lost, For the want of a horse the rider was lost, For the want of a rider the battle was lost, For the want of a battle the kingdom was lost--; And all for the want of a horseshoe nail."*

— Benjamin Franklin

## App of the Week

I am listing here a few Apps that I think are particularly useful for the elderly. They can all be bought from the Apple store and many are free (arranged in alphabetical order):

- [Evernote](#)
- [Flashlight](#)
- [Flipboard](#)
- [Magnifying glass with light](#)
- [Summly](#)
- [WebMD](#)
- [YouTube](#)



## Free Resource of the Week

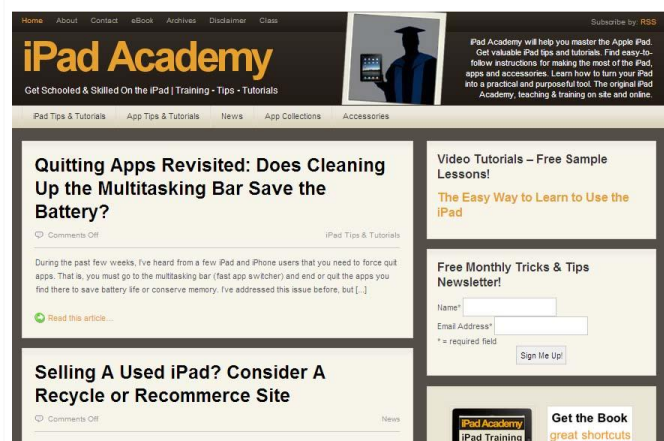
This is a very interesting short piece about the advantages and limitations of the iPad for Seniors :



<http://www.forbes.com/sites/joanlappin/2011/09/28/three-things-apple-ipads-do-well-for-seniors-and-the-one-huge-error-its-design-failed-to-consider/>

## Website of the Week

iPad Academy - Learn How to Use the iPad | Tutorials, Tips & Training



<http://ipadacademy.com>

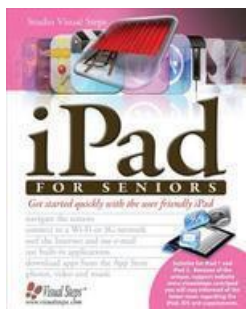
iPad Academy will help you master the Apple iPad. Get valuable iPad tips and tutorials. Find easy-to-follow instructions for making the most of the iPad, apps ...



## Book of the Week

### iPad for Seniors :

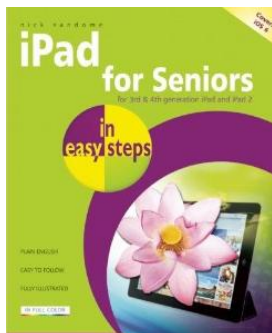
<http://www.visualsteps.com/ipad/>



This comprehensive book will show you how to get the most out of your iPad. The iPad is a user friendly, portable multimedia device with endless capabilities. Use it to surf the Internet, write e-mails, jot down notes and maintain your calendar.

But these are by far not the only things you can do with the iPad. This practical tablet computer also comes with built-in apps (applications) that allow you to listen to music, take pictures and make video calls. You can even look up addresses and well-known places around the world, with Maps.

In the Apple App Store you can choose from hundreds of thousands of apps to add extra functionality to your iPad. Many apps can be downloaded for free or cost practically nothing. Perhaps you are interested in new recipes, horoscopes, fitness exercises, news from around the world or podcasts? There is literally an app to do almost anything. With the step-by-step book iPad for SENIORS you can learn how to take complete advantage of this technology. Before you know it, you won't believe you ever lived without an iPad. Your world will open up and become a lot bigger!



### Another book for this week:

This book is a very useful one for getting started in the use of iPads.

While for the digital natives, it is easy to look up help files, find answers from YouTube, ask questions in Quora and find information from user groups, the digital

migrants will find it convenient to open this book, and follow the directions in the book to carry out the tasks on the iPad. The book explains all things very simply in plain English, it's easy to follow, fully illustrated and fully in colour.

[http://www.amazon.ca/iPad-Seniors-Easy-Steps-Covers/dp/1840785837/ref=dp\\_ob\\_title\\_bk](http://www.amazon.ca/iPad-Seniors-Easy-Steps-Covers/dp/1840785837/ref=dp_ob_title_bk)

## Video of the Week

Here is a course from lynda.com that covers many of the basic elements of using an iPad:



<http://www.lynda.com/iPad-tutorials/tips-and-tricks/68383-2.html>

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# Learning 221<sup>TM</sup>

Learning in the 2nd decade  
of the 21st century



In the Business of Thinking

Issue: 0025  
17<sup>th</sup> December 2012



Conversations with Prof. M.M. Pant on 'Matters Educational'

## Moving on to Social Media

In the preceding editions, we encouraged readers to see blogs and Tweets as a means of being connected. As we move on towards the New Year, there will be a shift to the more participative format of interactions on Social Media.



Well it seems, young children can do so without any divine intervention, by just using their gaming kits as in Xbox and a new range of devices called rather unimaginatively 3D printers.

I have personally been a witness to computing moving from big hall size computers (of which the IBM founder Watson said once upon a time that 8 would suffice for the world's computing need) to mid-frame, to minis, to PCs, laptops, notebooks, netbooks. Tablets, iPadminis in the course of about half a century.

CAD/CAM and 3D printing are perhaps following a similar path of evolution. At one time it was the TIFR in Bombay which had the biggest computer and similarly IIT Kanpur had a CAD centre.

I just learnt that the COO of Makerbot has ready a 3D Printer for US\$ 500. This is named Soliddoodle and the price is less than what I paid for an iPad mini acquired a couple of weeks ago.

The potential of this in transforming the economy of the country by empowering youth with 21st century skills, without being dependant on FDI in retail and being reduced to salespersons (which in turn will be replaced by robots) is enormous. It is an often held view that without manufacturing there cannot be a strong economy, and an economy based only on outsourcing and services cannot be at the top.

Manufacturing for one with efficiencies because of reduction of operating, sourcing and distribution costs, would bring about a 'phase transition' in the Global economy.

Special issue on  
**"Manufacturing  
on demand: The  
coming industrial  
revolution"**

There will of course be the usual noises by the 'big manufacturing' against this 'small custom manufacturing' but maybe new models of large enterprise like 'Amul' or 'Lijjat Papad' will crop up. Who knows the new Solid doodle and its successors will turn out to be the new 'charkha' in every hand that Gandhiji espoused. And its conflict with Nehru's industrialisation model would have been reconciled.

And finally all of us who are opposed to the FDI in retail, can have the last laugh and Walmart may go the Lehmann brothers way.

Just look around the traditional arts and crafts of India and see the beauty, richness and creativity present. Just look at the ingenuity, labelled as 'Jugaad' and imagine the economic output that could be unleashed by these.

Maybe the recent US prediction that India will become the world's largest economy overtaking China by 2030 will indeed become true.

All we need to do is to empower our people to become self- learners and tinkerers; and avoid like the plague AICTE approved engineering and Management programs as they come bundled with guarantee of low quality and rapid obsolescence.

I look forward to your support in building this community. Please do forward this to your network by clicking the **"forward to a friend"** button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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### For Learners

Tinkering not engineering is the future. Look though some of these resources. If you want to be in the IT field, a BCA or MCA will not be of much help in the future. Even B.Tech. and M.Tech. will become irrelevant very soon.

You have seen how just a short while ago there was clamour for Bharat Ratna for Sachin Tendulkar, and now they are saying he should have retired. Similarly they say that Dhoni should not be captain.

Obsolescence in the Computing Industry is even faster and more brutal. So explore self-learning and peer supported learning.



---

### For Teachers

It is very important for teachers to augment their traditional teaching-learning practices with new creative and exploratory experiences. Constructing learning is of course about developing mental models, but this is often enhanced by making physical objects by hand. When we were at School, this was with plasticine or play dough. And sometimes with real stuff like clay. The modern version is sugru (<http://www.sugru.com>) which is the exciting new self-setting rubber that can be formed by hand. It moulds like play-dough, bonds to almost anything and turns into a strong, flexible silicone rubber overnight.



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### For Parents

Encourage your children to be creative, imaginative and thinkers. If they have an interest in making things encourage them to do so. Buy them a tablet, gift them a raspberry pi, hex bugs the micro-robotic creatures and encourage them to unleash their creativity.



## For Knowledge Workers

Now you can go full throttle and build on the world of bits or the world of atoms.

This is the best time in history for creative knowledge workers and there are almost no limits to what an individual can accomplish, thanks to the disintermediation caused by Internet and allied technologies.

### Quotes of the Week



***“The creative person wants to be a know-it-all. He wants to know about all kinds of things—ancient history, nineteenth century mathematics, current manufacturing techniques, hog futures. Because he never knows when these ideas might come together to form a new idea. It may happen six minutes later, or six months, or six years. But he has faith that it will happen.”***

— Carl Ally



***“As competition intensifies, the need for creative thinking increases. It is no longer enough to do the same thing better . . . no longer enough to be efficient and solve problems.”***

— Edward de Bono

### Free Resource of the Week

**Instructables - Make, How To, and DIY:**



<http://www.instructables.com>

Instructables is the Biggest How To and DIY community where people make and share inspiring, entertaining, and useful projects, recipes, and hacks. Once registered, members can create instructables that are step-by-step descriptions of projects they want to share online. They are written in such a way that they easily allow other members to replicate, and share with the rest of the community. Members can also upload videos and slideshows, depicting a project that they haven't documented.



## App of the Week

### Tinkercad - Mind to design in minutes

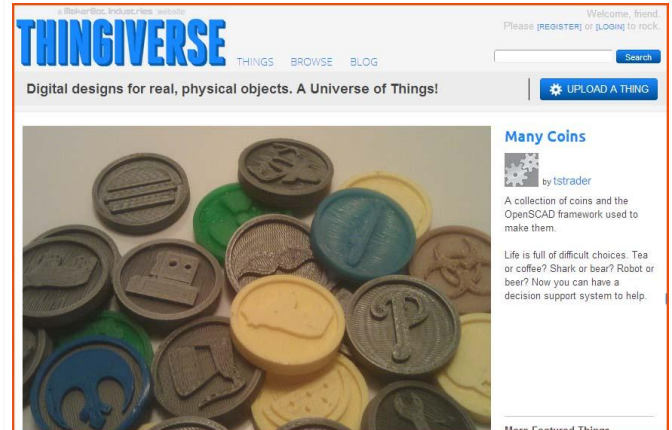


<https://tinkercad.com>

Tinkercad is an easy-to-use 3D CAD tool. ... With Tinkercad you can quickly turn your idea into a CAD model for a 3D printer. Free trial, no credit card required ...

## Website of the Week

### Thingiverse - Digital Designs for Physical Objects:



[www.thingiverse.com](http://www.thingiverse.com)

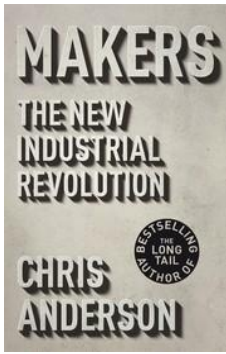
Thingiverse is a universe of things. Download our files and build them with your lasercutter, 3D printer, or CNC.

Thingiverse is a website dedicated to the sharing of user-created digital design files. Providing primarily open source hardware designs licensed under the GNU General Public License or Creative Commons licenses, users choose the type of user license they wish to attach to the designs they share. 3D printers, laser cutters, milling machines and many other technologies can be used to physically create the files shared by the users on Thingiverse.

Thingiverse is widely used in the DIY technology and Maker communities, by the RepRap Project, and by 3D Printer and MakerBot operators. Numerous technical projects use Thingiverse as a repository for shared innovation and dissemination of source materials to the public. Many of the objects are for the purpose of repair.

Thingiverse is seen as a “go to” site for those interested in 3D printers.

## Book of the Week



**"Makers: The New Industrial Revolution"** by **Chris Anderson** is about how all that is being reversed. Over the past ten years, the internet has democratised publishing, broadcasting and communications, leading to a massive increase in the range of participation in everything digital - the world of bits. Now the same is happening to manufacturing - the world of things.

He explained how this is happening: how such technologies as 3D printing and electronics assembly are becoming available to everybody, and how people are building successful businesses as a result.

[http://www.flipkart.com/makers-1847940668/p/itmd68kqcgig3nf?pid=9781847940667&ref=1beaad5-c68b-4af1-9e25-3e1954ef84ec&srno=s\\_1&otracker=from-search&query=Chris%20Anderson%20%20The%20Makers](http://www.flipkart.com/makers-1847940668/p/itmd68kqcgig3nf?pid=9781847940667&ref=1beaad5-c68b-4af1-9e25-3e1954ef84ec&srno=s_1&otracker=from-search&query=Chris%20Anderson%20%20The%20Makers)

## Video of the Week

This video was created at the beginning of the year, and there is rapid progress since then:



[http://cnettv.cnet.com/future-3d-printing/9742-1\\_53-50118533.html](http://cnettv.cnet.com/future-3d-printing/9742-1_53-50118533.html)

## Story of the Week by Chris Anderson

Summarised from:

<http://www.guardian.co.uk/technology/2012/sep/18/chris-anderson-internet-industrial-revolution>

Back in the early 1940s my grandfather had a great idea. Noting the obsession Californians have with perfectly green front lawns, he decided that what they needed was an automatic sprinkler system. He lavished time and love on it, inventing this and fine-tuning that, and eventually came up with what was essentially an electric clock that could be timed to turn water valves on or off at given times of the day and night. Patent number 2311108 was duly filed in 1943, at which point my grandfather started knocking on manufacturers' doors. It was a long, arduous process. Finally, in 1950, after endless discussions, the Moody Rainmaster hit the stores. It earned my grandfather a modest income.

Recently, I decided to follow in his footsteps, but apply a little 21st-century know-how to the mix. Online I found a few like-minded souls interested in producing an improved water sprinkler. We used open-source software to help us create a sprinkler system not only capable of being operated remotely via an app by worried gardeners on holiday, but also sophisticated enough to factor in the latest local weather forecasts before deciding whether to switch the system on or off. We then sent our designs to an assembly house who duly came up with a smart-looking finished product. It has proved quite popular. It took my grandfather a decade and a small fortune to perfect his device and market it. It took us a few months and \$5,000.

And that in a nutshell is the Maker movement – harnessing the internet and the latest manufacturing technologies to make things. The past 10 years have been about discovering new ways to work together and offer services on the web. The next 10 years will, I believe, be about applying those lessons to the real world. It means that the future doesn't just belong to internet businesses founded on virtual principles. but to ones that are firmly rooted in the physical world.

This has massive implications not just for would-be entrepreneurs but for national economies. The fact is that any country, if it wants to remain strong, must have a manufacturing base.

This adaptive business of the future will need to be accommodating in other ways, too. It needs to be in constant contact with its customers and be prepared to respond quickly to their feedback and criticism. It needs to be able to draw on skills wherever they are, not merely on people who happen to be close to home. The co-founder of a small robot aeroplane enterprise I run, for example, is not someone who answered an ad, but an enthusiast who came to my attention when he started posting inspired ideas for improvements on a online forum I was hosting.

The Maker movement has a long way to go before it can really be said to have come of age. But that doesn't mean it should be ignored or regarded solely as a hobbyist's or niche manufacturer's paradise. It represents the first steps in a different way of doing business. Rather than top-down innovation by some of the biggest companies in the world, we're starting to see bottom-up innovation by countless individuals, including amateurs, entrepreneurs and professionals. We've already seen it work before, in bits, from the original PC hobbyists to the web's citizen army. Now the conditions have arrived for it to work again, at even greater, broader scale, in atoms. If the Second Industrial Revolution was the Information Age, then I would argue that a Third Industrial Age is on its way: the age of the Makers.

## Values, Integrity & Ethics for 21st Century Professionals

### About the Program

This course develops the views and insights from the above works and supplements them with philosophical wisdom and spiritual inputs from India and the orient to suggest that a just and ethical life of integrity is supported by the following 5 pillars: (1) Philosophy, (2) Servant Leadership, (3) Dharma, (4) Trusteeship and (5) Grit, Perseverance and Tenacity

### Duration and Delivery Model

Normal duration recommended is 6 months. That would be learning effort distributed uniformly over about 20 weeks corresponding to an academic semester. For more relaxed learning the course can be spread over one year. For highly motivated learners who can put in the required effort, it can be completed in 3 months. The course contents will be sent to each learner through about 20 e-mails.

### Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "dharamguru21@gmail.com".



**For any further Information, Contact:**

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Cell: +91 - 98100 73724; Web: [www.mmpant.net](http://www.mmpant.net)

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## Moving on to Social Media

This will be the second last edition of this Newsletter. For the last few issues, I have been drawing attention to Twitter and my Wordpress blog for my postings on these 'Matters Educational'. We will get more active on social networks to develop a community for Learning 221, that will hopefully be a major group in India for reforming and transforming its education.

In the preceding editions, we encouraged readers to see blogs and Tweets as a means of being connected. As we move on towards the New Year, there will be a shift to the more participative format of interactions on Social Media.



In a couple of weeks, we will witness the largest gathering of humans at the **Kumbha Mela** at **Allahabad**, and in a few months after that we will be witness to the greatest 'Testing Tamasha' of the world. Millions of young learners will be taking numerous tests, ranging from engineering, medical to admission to various courses of various Universities. These will lead to joys of success, disappointment of failure, some will feel that their life is ruined and a few driven to suicide as well.

An important question that arises is how accurate and reliable are these tests? What are the attributes of a good test? Should there be an element of accountability of test administrators. As things stand, protecting the secrecy of the test papers and confidentiality of the evaluation system is considered most important and various provisions of the

Indian Penal Code are invoked occasionally, but the exam and test providers are not required to live up to any standard of relevance, quality and external review. The entire principles of external verification and working to specified quality standards stand totally abdicated. This is true almost all over the world for most of the tests.

Special issue on  
“Testing the  
Tests”



The canonical principle adopted is that if a number of candidates are asked exactly the same questions and required to answer them without any help in the same prescribed time, under proctored conditions, then those who can answer the most to the satisfaction and expectations of the examiners are the best. However the fundamental question of whether the attributes and qualities being sought to be tested have value, and more importantly what is the degree of accuracy and reliability of the scores assigned to Individual test takers.

Almost 4 decades ago in a book on evaluation by Edwin Harper, he summarised the results of some interesting research in how examiners evaluate the scripts assigned to them. He reported that there is a wide variation in the marks given by different examiners to the same script, that led to the conclusion that 'examiners do not agree with each other'. Even more interesting was the outcome of another experiment where the same answer script was sent to the same examiner again after several months. It was found that there was a significant variation in the scores. This leads to the inference that 'examiners do not agree with themselves'.

We have made much progress in moving towards consumer protection, right to information and rights of children to a safe learning environment. We have a great awareness of the negative effects of junk food and serious punishments for adulteration and fake goods.

Shouldn't fake tests meet the same fate.

The Fairtest organisation in the US has made a scathing observation that the quality of pet food in the US is better regulated than the tests being administered to the children.

There is a whole body of knowledge and good practices for assessment, including item analysis on the basis of facility, reliability and discrimination index, and quality examinations do declare relevant parameters to organisations who use their tests.

But in India we distinguish between students on one mark difference when the error of measurement itself would be much more.

As we come towards the end of 2012, we have the good fortune that the Vice Chancellor of Delhi University is a distinguished Mathematician, the director of NCERT is also a mathematician, and the Chairman of CBSE is an IITian. There can be no better time to acknowledge the importance of educational measurements and systematically improve upon the random unreliable assessment to one where we know what we are measuring and how reliably and accurately.

I look forward to your support in building this community. Please do forward this to your network by clicking the "**forward to a friend**" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)

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## For Learners

As responsible learners, you must take note of the fact that all instruments may have errors in their measurements. Those of you, who have been doing some science courses, are aware of errors and their importance. So do not take any test scores with more value than they deserve.

Life is difficult for you with these imperfect tests being used to make final definitive decisions about your admission or employment, and you must acknowledge that life is not fair. Having said that, also remember that when one door closes at you, many more opportunities may open up.



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## For Teachers

Almost all teachers are involved in the process of making tests and evaluating tests made by them or sometimes made by a statutory board or university and evaluate them according to guidelines that may have been provided. The story from UK in the next section and at the end, will resonate with many of you. I would not recommend losing your job, but short of that you should become proactive towards better testing.



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## For Parents

This story should be causing some worry to most parents:

### Whistleblower suspended for revealing exam mark mistakes - Channel 4 News

A senior exam board supervisor has been suspended for exposing errors in the way last year's GCSE and A-level exams were marked. As part of an exclusive Channel 4 News investigation into exam marking, he revealed worrying mistakes in simple addition, which in some cases will have led to some pupils getting the wrong grade.

Not only is there evidence of careless marking where examiners have simply added up the marks incorrectly, but in one case those in charge seemed willing to turn a blind eye to mistakes.

Channel 4 News can also reveal the amount that the three main exam boards charged schools for re-marking their own papers - an estimated £5.5m. And while every student can be affected, state schools are less likely to have available funds to pay the costs of a re-mark, which range from £23 up to £60 per paper.



### Whistleblower suspended

David Leitch, a senior supervisor at the exam board OCR, first became aware of the problems when he found mistakes in the final scores of a hundred exam scripts, during a routine clerical check requested by schools.

His team started to make supplementary checks on additional scripts by the same markers – and found hundreds more papers with errors. But when he told his bosses, he was ordered to stop the checks and to inform only those schools who had specifically asked for a re-mark. He has now been suspended.

Unhappy with the decision not to pursue the mistakes, he reported his findings to the regulator Ofqual. As a result, some marks were corrected but other affected schools were left in the dark – until now.

Mr Leitch was unhappy with both his superiors' and Ofqual's responses and took it upon himself to email 30 schools last week, telling them about the mistakes. He has identified dozens of papers where the marking error is so great – it has potentially meant a pupil being given a lower overall grade.

In the coming days, students who trusted the exam boards may finally discover their real marks – marks which up until now the authorities had decided to keep from them.

**Read more:** GCSE and A-Level exam re-marking Q+A

### Examiners under pressure

However Mr Leitch is not alone in his dissatisfaction with the system. The exam insiders who have spoken to Channel 4 News describe a process where errors seem almost inevitable.

"If you want to earn a professional wage – which I'd say is £20 an hour – you're looking at marking eight scripts an hour," said Pete, a teacher who will be marking A-levels this summer. "That isn't enough time to give a fair deal, particularly if you're an inexperienced examiner. The fastest I mark is seven scripts an hour."

Another examiner, Malcolm, marked music A-level papers for eight years until 2010 when he gave up because of the pressure on markers to work too quickly.

"I don't think the exam boards understand the length of time it takes to do these things," he told Channel 4 News. "Mistakes are going to happen – but you might not be able to spot them."

### **Careless mistakes**

At Magdalen College School in Oxford, there's not a lot of trust in exam marking. Last summer's GCSE results sparked a battle for justice.

Biology teacher Colin Pearson was particularly disturbed by the marking of one of this January's biology A level papers, in which a standard form of scientific notation was apparently not understood by the marker:

"This is an abbreviation that any biology teacher or professional would immediately recognise but it has been marked wrong," he said. "It raises questions about the markers subject knowledge – in particular, do they know more than the pupils whose work they are marking."

Georgia Totvanian is in her final year at Leeds university – but her life there would never have materialised if she had trusted the examiner who marked one of her final year history A-level papers. She was initially given a 'U', but it was moved to a 'B' after a re-mark.

"If I had accepted a 'U', I wouldn't have got into Leeds, probably wouldn't have got in my second choice and I would have had a 'U' on my transcript which would have looked so bad," she told Channel 4 News. "God knows where I would have ended up."

### **State schools disadvantaged**

Magdalen is the highest performing school in the UK for GCSE results – getting accurate marks is critical to maintaining that top ranking – and that means re-marks are a routine fact of life.

But re-marks cost money – schools only have the additional fees refunded if pupils' overall grade increases, not their mark, which means schools are spending millions on getting papers marked twice.

Not all the re-marks are indicative of mis-marking. But in total, the main three exam boards charged around a £5.5m for re-marking their own papers.

However re-marks on the scale seen at private schools simply isn't a possibility for the Sacred Heart Roman Catholic School in Camberwell, south London. The headmaster, Serge Cegai, told Channel 4 News that his school's funds are being squeezed and money is tight.

"I'd like to be able to say money is no object – let them all get checked but unfortunately I can't say that. Money is an issue," he said. "Given complete freedom – I'd have twice as many appeals every year."

**Read more:** Examiners suspended for 'tipping-off' teachers

### **The most common re-marks**

The exam regulator Ofqual has never collated information on re-marks by individual subject, paper and exam board, so has never before been able to determine which subjects require the most re-marks.

Channel 4 News analysed Ofqual's 'exceptions' list - where five per cent or more of the candidates requested a re-mark – and found that over half of these papers were in English, with history and music also featuring prominently.

Ofqual doesn't see these figures as any cause for alarm, reflecting more on the subjective nature of these particular subjects.

But many examiners and teachers believe these are subjects that need a confident, experienced marker. One told Channel 4 News he believes there's simply too much toleration of wildly varying marks.

"The system is flawed – as team leader I checked in marks were within tolerance – but tolerance is three marks either way so six marks difference between the most generous and mean markers," he said. "Six raw marks difference can mean two grades."

The OCR exam board told Channel 4 News it regrets the "unacceptable mistakes" which occurred.

"We have processes for checking the total marks awarded to each script, but mistakes can occur in a system where examiners mark using pen and paper on hard copy scripts," said a spokesperson, who also apologised "unreservedly" to the schools, students and parents affected.

OCR said students taking GCSEs and A-levels this year "can be assured" that mistakes will not be tolerated.

### Ofqual 'will continue to investigate'

Mr Leitch presented his findings to the education select committee, whose findings on exam marking will be released in June.

In the meantime, the exam regulator Ofqual told Channel 4 News: "When this issue first arose, last year, we asked the exam board to carry out extended checks, identify the weaknesses in its processes and to put these right in time for the January exams. It appears that new evidence may have come to light. We will continue to investigate as further issues are raised."

Speaking on Channel 4 news, the Director of Regulation at the exam watchdog Ofqual, Fiona Pethick, said she was not satisfied with the situation and would continue to look into it, adding: "if we find [exam board] OCR to be negligent, we'll take action." However she insisted the problem was not widespread.

As schools continue to dish out unprecedented sums of money to the exam boards – a record £328m last year alone – many may wonder whether they're getting value for money.

## For Knowledge Workers

A great opportunity beckons professional to help carry out better assessments of learning. This goes by the rather dull name of 'Learning Analytics', an emerging field that has the potential to transform assessment of learning in the same way that medical diagnostics has moved far from the counting of the pulse, estimating fever by checking the forehead with the palm and examining the tongue and maybe throat with a torch. That could not pass off as a medical examination even in the most backward parts of the world. But testing of learning is more or less at the same stage, a shame when we actually have a mobile phone in very hand. A very dull anachronism.



## Quotes of the Week

***"All Board examination results must by law be required to put a statutory declaration with their score cards that states: 'The marks obtained by the candidate has no correlation with his intellectual or behavioural abilities, and any correlation one may find is purely coincidental, and was not part of the design or execution of the examination.'"***



— M.M. Pant

***"There is more regulation of pet food than of the tests that determine our children's futures."***

— Fairtest.org

## Free Resource of the Week

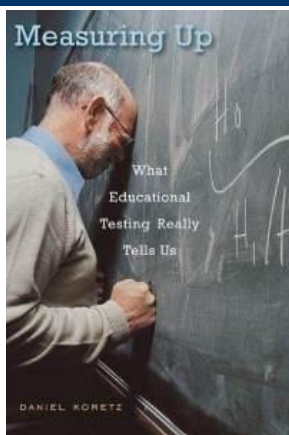
Multiple Choice questions are being increasingly adopted for screening students, and then ranked on the basis of these scores. Sometimes grades are given after normalising these raw scores. To appreciate the limitations of the MCQs, read the fact-sheet from Fairtest in this link :

The screenshot shows the FairTest website. The header includes the FairTest logo, navigation links (Home, K-12 Testing, University Testing, Newsletter, Fact Sheets, Get Involved, News, Other Resources), and a search bar. The main content area is titled 'Multiple-Choice Tests' and includes a submission date, a brief explanation of multiple-choice tests, and a list of sample questions. A sidebar on the right contains links to 'Fair Test finds that nearly 950 four-year colleges do not use the SAT I or ACT to admit substantial numbers of bachelor degree applicants', 'See the searchable list of schools', and 'Find out how and why colleges go Test Optional'. Another sidebar on the right is titled 'What's New at FairTest' and lists recent updates.

<http://www.fairtest.org/facts/mctfcet.html>



## Book of the Week



### **“Measuring Up: What Educational Testing Really Tells Us” by Daniel Koretz**

How do you judge the quality of a school, a district, a teacher, a student? By the test scores, of course. Yet for all the talk, what educational tests can and can't tell you, and how scores can be

misunderstood and misused, remains a mystery to most. The complexities of testing are routinely ignored, either because they are unrecognized, or because they may be—well, complicated.

Inspired by a popular Harvard course for students without an extensive mathematics background, *Measuring Up* demystifies educational testing—from MCAS to SAT to WAIS, with all the alphabet soup in between. Bringing statistical terms down to earth, Daniel Koretz takes readers through the most fundamental issues that arise in educational testing and shows how they apply to some of the most controversial issues in education today, from high-stakes testing to special education. He walks readers through everyday examples to show what tests do well, what their limits are, how easily tests and scores can be oversold or misunderstood, and how they can be used sensibly to help discover how much kids have learned.

[http://www.flipkart.com/measuring-up-0674035216/p/itmcczzh4uqkxxdag?pid=9780674035218&ref=33108412-82ed-4cff-bdf0-06525a29c80a&srno=s\\_1&otracker=from-search&query=Measuring%20Up%20What%20Educational%20Testing%20Really%20Tells%20Us](http://www.flipkart.com/measuring-up-0674035216/p/itmcczzh4uqkxxdag?pid=9780674035218&ref=33108412-82ed-4cff-bdf0-06525a29c80a&srno=s_1&otracker=from-search&query=Measuring%20Up%20What%20Educational%20Testing%20Really%20Tells%20Us)

## Video of the Week

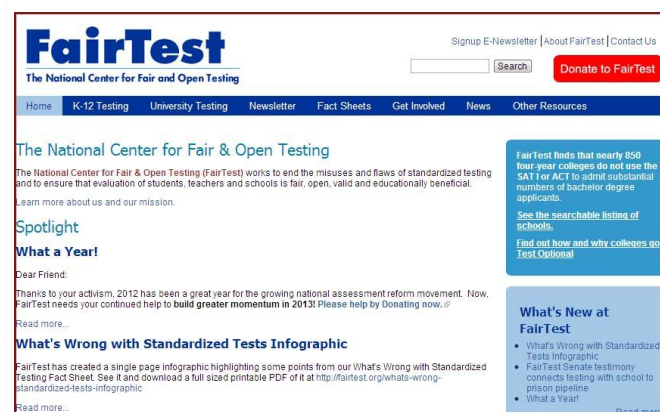
### **Beyond the Bubble: A new generation of history assessments:**



[http://m.youtube.com/#/watch?v=LEzIPO8Py4&desktop\\_uri=%2Fwatch%3Fv%3DLEzIPO8Py4&gl=GB](http://m.youtube.com/#/watch?v=LEzIPO8Py4&desktop_uri=%2Fwatch%3Fv%3DLEzIPO8Py4&gl=GB)

## Website of the Week

FairTest is a great organisation drawing attention to the problems and issues with current forms of testing:



<http://www.fairtest.org>

## Story of the Week

Very recently (October 11th 2012) the BBC covered the fiasco in evaluation of the GCE. That story is reproduced below:

Thousands of pupils to resit English GCSEs

More than 45,000 students are to resit their English GCSEs next month after a row about grades, figures given to the BBC by exam boards show.

The figure is about one in 14 of those who took the exam earlier this year.

Pupils from England, Wales and Northern Ireland were offered the chance to redo part or all of their GCSE English after complaining they had been downgraded.

Meanwhile an alliance of heads' and teachers' unions is submitting a legal challenge to the High Court next week.

Exam boards said they were offering the English resits free of charge to schools as a response to strength of feeling on the issue.

The AQA board, which has the largest market share for English GCSE, said in an earlier statement that it had "followed the correct procedures and awarded the right grades" but understood students' disappointment.

Brian Lightman, general secretary of the Association of School and College Leaders (ASCL), said: "We know that thousands of students who sat the exam in June and got a D grade achieved the same level of work as their fellow students who took the exams in January and received a C.

"It is only because of when they took the exam that they are being penalised and told to resit the exam. This is completely unfair. Rather than telling these students to try again, their work should be marked to the same standard as if they took the exam in January."

### Legal action

An alliance of heads and teachers' unions is continuing to press for June's papers to be regraded in line with the January C-grade boundaries.

In its pre-action letter, the alliance said pupils who took GCSE English in June had been treated with "conspicuous unfairness".

A spokesman for the alliance said that following a meeting of legal representatives on Wednesday, it had been decided a claim for a judicial review would be put forward next week.

"We have now thoroughly examined the case that we have and we are convinced of the merits of our case, and the expectation that we will have a success to get the outcome we want - which is a regrade for students," he said.

"We will be putting our claim together and submitting it over the next week."

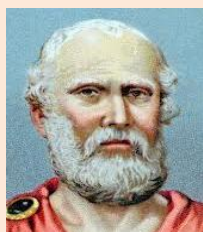
Exams watchdog Ofqual conducted an inquiry into the fiasco, which concluded that January's GCSE English assessments were "graded generously" but the June boundaries were properly set and candidates' work properly graded.

The regulator insisted it would be inappropriate for either of the sets of exams to be regraded and students would be given an extra chance to resit the GCSE in November.

"We have responded to the pre-action letter and are rigorously defending our decisions," Ofqual said in an earlier statement.

In Wales, Education Minister Leighton Andrews ordered the WJEC exam board to regrade Welsh students' English papers.

As a result, nearly 2,400 Welsh pupils who took English with the exam board received better results.



***"Do not train a child to learn by force or harshness; but direct them to it by what amuses their minds, so that you may be better able to discover with accuracy the peculiar bent of the genius of each."***

— Plato

Brought to you by:





## Moving on to Social Media

This is the last issue of the weekly newsletter.

I started this attempt at producing a weekly Newsletter to share trends and pieces of information with a learning community of teachers, parents, learners and young professionals particularly Knowledge workers, who were interested in pushing the frontiers of education. When I had started to think about this weekly e-mail newsletter, I had a view from the younger lot that e-mail is so passé, and people are on the Internet and on social media 24x7, and so this engagement should perhaps be on Facebook, as would probably most teaching in the future. At the other end of the spectrum were persons who requested that if I could send them a print-out of the Newsletter, they would want to display it in the Library for all their colleagues to read. Some actually made printouts and distributed them. And some sought permission to include some articles in their magazines.

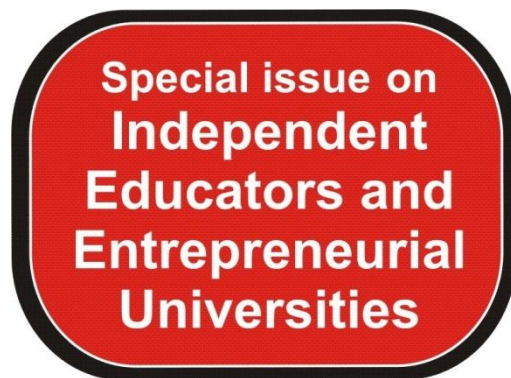
### About the Newsletters:

During the course of the last 6 months, the total number of issues of newsletters produced and distributed has been 27 including this last issue. A consolidated list is placed below:

1. **July 2<sup>nd</sup> 2012:** Introductory. About the newsletter; listed some of the topics for future issues.
2. **July 9<sup>th</sup> 2012:** Drew attention to Elinor Ostrom and learning Communities.
3. **July 16<sup>th</sup> 2012:** What would be the attributes of an educated person in the future? Say 2050.
4. **July 23<sup>rd</sup> 2012:** Life-long learning: stages of life.



5. **July 30<sup>th</sup> 2012:** Educational Apps.
6. **August 6<sup>th</sup> 2012:** Overcoming Maths Phobia.
7. **August 13<sup>th</sup> 2012:** Self-directed Learning: Auto-didacticism
8. **August 20<sup>th</sup> 2012:** Creativity
9. **August 27<sup>th</sup> 2012:** 21st Century Giftedness
10. **September 3<sup>rd</sup> 2012:** Teacher's Day Special
11. **September 10<sup>th</sup> 2012:** Developing Educational Apps with ApplInventor
12. **September 17<sup>th</sup> 2012:** Gamifying Learning
13. **September 24<sup>th</sup> 2012:** Disruption in Higher Education
14. **October 1<sup>st</sup> 2012:** ICT Skills and Digital Divide
15. **October 8<sup>th</sup> 2012:** Throwaway Technologies
16. **October 15<sup>th</sup> 2012:** Collaborative and Co-operative Learning
17. **October 22<sup>nd</sup> 2012:** Every Child is a Winner
18. **October 29<sup>th</sup> 2012:** Twitter for Teaching-Learning
19. **November 5<sup>th</sup> 2012:** MOOC: Massively Open Online Courses
20. **November 12<sup>th</sup> 2012:** Towards a Science of ideas: Ideonomy?
21. **November 19<sup>th</sup> 2012:** Becoming a RockStar Teacher
22. **November 26<sup>th</sup> 2012:** Becoming an UberSmart Learner
23. **December 3<sup>rd</sup> 2012:** Pre-natal, neo-natal and pre-school learning
24. **December 10<sup>th</sup> 2012:** Smartphones and Tablets: A Senior Citizens constant companion
25. **December 17<sup>th</sup> 2012:** Manufacturing on Demand: The coming Industrial revolution
26. **December 24<sup>th</sup> 2012:** Testing the Tests
27. **December 31<sup>st</sup> 2012:** Independent Educators and Entrepreneurial Universities.



You may have a few issues missing for one of many reasons: for example, your e-mail system pushes it into the junk folder. Have a re-look and you may recover some of these. You may have accidentally deleted it or there may have been delivery failures. In any case, if you send a mail, I will happily organise to mail you another copy.

All in all, I think the newsletter has served its purpose well. But it is time to take the next step towards the goal of creating a vibrant learning community that can change the educational landscape. In addition to the Nobel Prize winning work of Elinor Ostrom that I referred to in the 2nd issue dated 9th July 2012, I am also convinced of the words of Margaret Mead "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

Towards this creation of an active community, we will start using Twitter and blogs as our means of brief frequent communications with inputs and opinions from all members. I also appreciate that many 'silent members' are also important and Milton said that when he wrote 'they also serve who only stand and wait'.

Keeping in view that many would still prefer an e-mail in their in-boxes, I am thinking of summarising every month, the essence of the conversations in a short crisp 2 pager, with many links and e-mailed to the list. We may also consider whether this too can be a blog, the link to which is tweeted.

I look forward to your support in building this community. Please do forward this to your network by clicking the "forward to a friend" button at the bottom.

M.M. Pant

[www.mmpant.net](http://www.mmpant.net)



## For Learners

If you are at the University level or even at higher secondary level (reading this newsletter), you would perhaps be sceptical of the Government and regulating agencies understanding of challenges to higher education, and their completely lackadaisical approach to overcoming these challenges.

Your most likely hope is in the rise of independent educators who as responsible professionals help you bridge the gap between where the rest of the world is heading, and our myopic if not cataract vision for our learners.



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## For Teachers

If one were to pursue the profession of medicine, law, architecture or even finance as in a CA, CFA or CFE (Certified Fraud Examiner), one could choose to be employed by a large corporation, the Government or be self-employed. But these options are not available to a qualified educator. One may have a teaching credential or a Ph.D. with impeccable academic credentials, but one cannot teach as a self-employed academic for recognised qualifications. One of the undesirable consequences is that the goals of universal primary education are not being met, nor is the desired gross enrolment ratio being achieved for higher education. With 4 recent technological trends of smartphones in every hand and more educational Apps becoming available, better data plans for Internet, more on the cloud and offline groups supporting online communities or forming offline communities based on online groups. These become smaller learner cohorts in an otherwise MOOC model.



Just as salaried theatre artists evolved into independent actors and now millionaire superstars, we may see independent educators, practicing as freelance professors within the framework of existing Institutions later evolving to Institutions themselves, especially in an entrepreneurial university environment.

Once it is made possible, it is clear that many academics would love to be a freelance professor, offering courses online and earning what they can earn. This requires two things: a teaching environment, and accreditation. Several people have already built the first; all that's lacking is the second. And once we acknowledge that providing high quality learning for future generations than preserving old unviable models, the corresponding accreditation models would also work out.

By way of information, among the dozens of choices available for independent professors, Udemy and Straighter line are 2 very good options and in India we have Wiziq and Quampus as 2 similar options. As this model gets more successful, may more solutions would crop up to support one person academies. Possibly a 21<sup>st</sup> century version of our own traditional gurukul.

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## For Parents

You are the only ones to be seriously interested in your children's future. And if they do not get the right education, there is a serious possibility of 'downward social mobility' and surely after the last 2 generations of a general improvement in economic and social well being, you don't want a glorious step backwards.

You must support in every possible way, independent educators, just as you do for doctors, lawyers and other professionals.

Of course for peons with University degrees, there is also possibilities of becoming an independent educator as well as promoter and investor in the idea of the entrepreneurial academy.



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## For Knowledge Workers

The concept of an entrepreneurial University was a vision (or perhaps a dream) of Burton Clark, who desired academics to pursue their goals rather independently.

We find the Entrepreneurial University to be a place that diversifies income to the point where its financial portfolio is not heavily dependent upon the whims of politicians and bureaucrats who occupy the seats of state policy, nor upon business firms and their commercial influence nor even upon student tuition as main.



Effective stewardship comes to depend not on the state or "the market", but on university guidance and self-determination. The entrepreneurial university does indeed provide a new basis for achievement".

In other words, he was trying to unlock the commercial value of the knowledge being created and held in a University, and this is feasible in the Knowledge economy more easily than in the Industrial Age or the agricultural age.

The idea is very suitable to implementation in the coming years, and can be a good idea to develop and pursue in the New Year.

We can't call it a University, because under section 3 of the UGC Act, only a body created by Parliament or State Legislature can be permitted to use the label University.

We could create an entrepreneurial academy, and not limit to higher education. Mainly driven by the technologies mentioned above, it will be for enterprising learners, enterprising faculty and enterprising business leaders. This will be an academic learning community with a difference. Seeking independence and acknowledging that 'he who pays the piper calls the tune' and that 'the Government funded autonomous Institute' is a myth, is able to establish both financial and academic autonomy without being at the mercy of the Government or large business corporates.

Interestingly, this year itself there has been a Report of the Planning Commission Committee Chaired by **Shri Sunil Mitra** on "**Angel Investment & Early Stage Venture Capital**" June 2012. Amongst other things, the report highlights that entrepreneurship engine in India, over the next decade, has the potential to create 2500 successful high growth ventures, with combined revenue of over Rs. 10 lakh crore (nearly USD 200 billion), and to generate 10 million direct & 20-30 million indirect jobs. Consequently, powering India's economic progress with inclusive economic development, innovative products/services for India's young population, India as a hub for frugal innovation, and attracting investment flows and creating substantial wealth.

If this has to go beyond mere platitudes, the concept of the 'Entrepreneurial University' has to be put in place. We will not get entrepreneurs as a bye-product of an educational system designed to train bureaucrats, or engineers or managers for large corporations, but we must catch them (those who have a spirit of enterprise and a passion and drive for change) young and train them for the role of leadership that we expect from them.

We should begin the New Year with such a resolve.

## Quotes of the Week



***"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."***

— Margaret Mead  
US anthropologist & popularizer of anthropology (1901 - 1978)



***"Trust is the most important resource. If a community has been forbidden from managing its resources for a long time, the main obstacle to overcome is the lack of trust and the effort to get organized in the first place. It's not a trivial matter."***

— Elinor Ostrom

## Website of the Week

We have in an earlier issue described Udemy as a site that could be used by independent freelance educators to offer their courses for free or for a fee. Another good option is **Straighterline** at:



<http://straighterline.com>

StraighterLine has been recognized as a revolutionary, innovative force in higher education by major news organizations and the U.S. Chamber of Commerce. Fast Company named StraighterLine one of the 10 Most Innovative Companies in Education, and its students have reported that their college credits have been accepted by several accredited colleges and universities.

## App of the Week

### Youtube Capture:

YouTube Capture brings shoot-to-share

YouTube released a new app for iOS devices Monday that allows users to take and upload videos with their iPhones and iPod touches with more ease.

The YouTube Capture app gives users the option to upload any videos they've shot to Google+, Facebook and YouTube all at the same time.

There are also editing tools included, such as the ability to add a soundtrack, do color corrections or stabilize the video all from within the app.

Most of all, YouTube Capture is built around ease of use, allowing anyone making a video the ability to shoot and upload all within just a few screen taps.

With the enhancement tools available in the app itself, having a steady hand or knowledge of lighting isn't necessary, as those issues can be addressed when the shooting is completed. Even when the video is finished, any additional corrections made can be undone, and you can also add these adjustments to the videos already in your Camera Roll. YouTube Capture is currently only available on iTunes, but an Android version is also in the works.

Check out this video laying Capture out below:



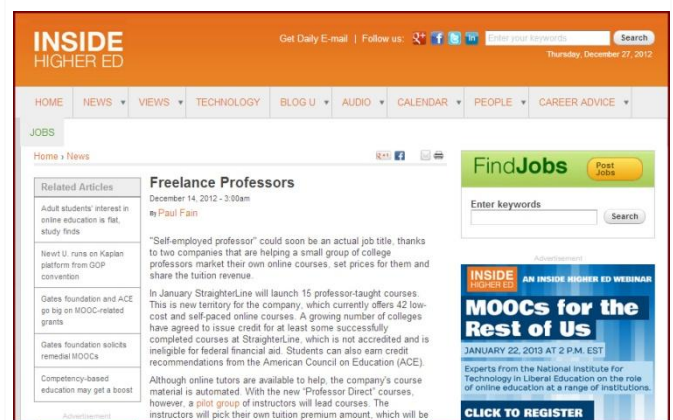
<http://www.youtube.com/embed/I0sOzdXce6o>

All in all, this would be an extremely useful App for all the categories that we address and especially for our aspiring independent educators within the entrepreneurial university.

## Free Resource of the Week

Freelance Professors by Paul Fain, Inside Higher Ed  
"Self-employed professor" could soon be an actual job title, thanks to two companies that are helping a small group of college professors market their own online courses, set prices for them and share the tuition revenue.

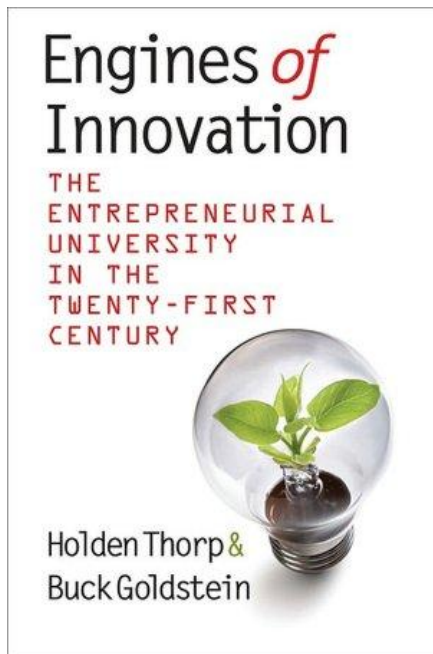
In January StraighterLine will launch 15 professor-taught courses. This is new territory for the company, which currently offers 42 low-cost and self-paced online courses. A growing number of colleges have agreed to issue credit for at least some successfully completed courses at StraighterLine, which is not accredited and is ineligible for federal financial aid. Students can also earn credit recommendations from the American Council on Education (ACE).



<http://www.insidehighered.com/news/2012/12/14/two-companies-give-faculty-more-control-online-courses>

## Book of the Week

**"Engines of Innovation: The Entrepreneurial University in the Twenty-First Century"** by Holden Thorp & Buck Goldstein



<http://www.amazon.com/Engines-Innovation-Entrepreneurial-University-Twenty-First/dp/0807834386>

## Video of the Week

Bored in school, failing classes, at odds with peers: This child might be an entrepreneur, says Cameron Herold. In his talk, he makes the case for parenting and education that helps would-be entrepreneurs flourish -- as kids and as adults.

Do watch this video of a TED talk by **Cameron Herold**:



[http://www.ted.com/talks/cameron\\_herold\\_let\\_s\\_raise\\_kids\\_to\\_be\\_entrepreneurs.html](http://www.ted.com/talks/cameron_herold_let_s_raise_kids_to_be_entrepreneurs.html)

An entrepreneur since childhood, Cameron Herold wants parents and teachers to recognize -- and foster -- entrepreneurial talent in kids.

## Story of the Week

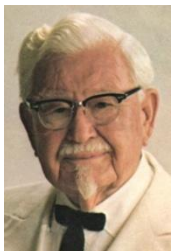
Instead of one story that is truly awe-inspiring, I have called out a few very brief stories that show the variety of entrepreneurship styles and approaches. Read on:



### 1. Sam Walton (1918 – 1992)

He is the founder of Wal-Mart (the largest public corporation according to the Forbes Global 2000) and Sam's Club.

**Inspirational story:** When he opened his first store, his store always stayed open later than the most other stores, especially during Christmas season.



### 2. Colonel Sanders (1890 – 1980)

He is the founder of Kentucky Fried Chicken (KFC) which is one of the largest fast food corporation in the world.

**Inspirational story:** In the age of 65 years old he tried to franchise his fried chicken receipt to restaurant owners, he went door to door by driving car. He got 1009 "No" answers before getting his first "Yes" answers from a restaurant owner who wanted to sell his fried chicken.

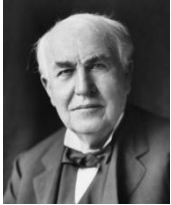




### 3. Mary Kay Ash (1918 – 2001)

She is the founder of Mary Kay Cosmetics, Inc.

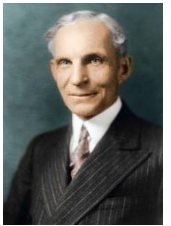
**Inspirational story:** She led the company based on her strong Christian faith. She told her employees to prioritize their life with God first, family second, and work third.



### 4. Thomas Alva Edison (1847 – 1931)

He is a famous inventor of light bulb, scientist, and businessman.

**Inspirational story:** He was failed thousands times in experiments while inventing light bulb.



### 5. Henry Ford (1863 – 1947)

He is the founder of the Ford Motor company. As owner of the Ford Motor Company, he became one of the richest and best-known people in the world.

**Inspirational story:** At 15 years old, he worked as a watch repairman. In 1891 he started his career as an engineer and he built a company in 1899 which was not successful. Finally Ford Motor Company was built in 1903.



### 6. Warren Buffett (1930 – Present)

He is one of most successful investor in the world. In 2009, he was ranked as the world's second richest person.

**Inspirational story:** When he was a child, he went door to door selling weekly magazines, Coca Cola, and gum.



### 7. Bill Gates (1955 – Present)

He is the founder Microsoft Corporation, consistently ranked among the wealthiest people.

**Inspirational story:** In 1975 he was dropped out from Harvard University and started a company together with his friend Paul Allen.



### 8. Michael Dell (1965 – Present)

He is the founder of Dell Inc. and one of the wealthiest people in the world.

**Inspirational story:** He started his business idea in 1984 with just \$1000 by providing affordable personal computers to college students.



### 9. Ingvar Kamrad (1926 – Present)

He is the founder of IKEA (the world's largest furniture retailer) and one of the world's richest men.

**Inspirational story:** He founded IKEA at age 17, he got the capital from a reward that he received from his father for doing well in school.



### 10. Oprah Winfrey (1954 – Present)

She is a television host, actress, producer, and the first black woman billionaire in America history with a lot of business accomplishments and awards.

**Inspirational story:** When Fortune Magazine interviewed her, she said "I don't think of myself as a businesswoman. The only time I think about being a businesswoman is now, while I'm talking to you. There's this part of me that's afraid of what will happen if I believe it all."

# Pre-natal, Neo-natal and Pre-school Learning

**For parents expecting a new child and/or having pre-school children**

## About the Program

While we often associate learning as something that is closely associated with going to School, the fact is that a child learns independently and at a very rapid pace even in the years before entering school. And as far as the cognitive abilities of a child are concerned and perhaps even a large part of the personality, it is developed in the early years. Although we do not have any such pre-school requirement here and admissions are supposed to be done by lottery, this would be a good benchmark for parents.

## Duration and Delivery Model

Normal duration recommended is 6 months. That would be learning effort distributed uniformly over about 20 weeks corresponding to an academic semester. For more relaxed learning the course can be spread over one year. For highly motivated learners who can put in the required effort, it can be completed in 3 months. The course contents will be sent to each learner through about 20 e-mails.

## Enrollment Process

Interested participants, desirous of enrolling for this course may send their basic details, i.e., Name, DoB, Educational Qualification, Email ID, Mobile number to "beforeschool21@gmail.com".



**For any further Information, Contact:**

Prof. M.M. Pant

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Cell: +91 - 98100 73724; Web: [www.mmpant.net](http://www.mmpant.net)

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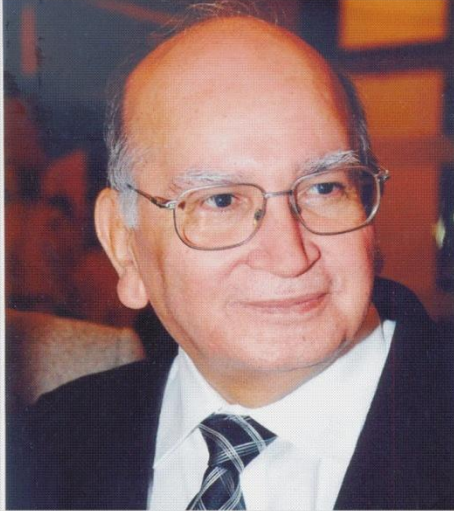


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## About Prof. M.M. Pant



**Prof. M.M. Pant** ([www.mmpant.net](http://www.mmpant.net)) is an internationally renowned expert specialising in pedagogy, technology and the development of tools and curricula for 21st century education for behavioural change.

A Ph.D in Computational Physics along with a Professional Law Degree, Prof. Pant has been a practitioner in the field of Law, IT enabled education and IT implementation.

Prof. Pant's current work and interests revolve around the development, delivery and promotion of educational products, processes and services that cater to the needs and interests of future learners, a framework that is named "**Learning 221<sup>TM</sup>: Learning for the 2nd Decade of the 21st Century**".

With his interest in Law, backed with practicing of Law in a High Court and his basic training in Science and IT, Prof. Pant has been particularly interested in the Cyber Law, Patent & Trade Mark issues, Intellectual Property Rights (IPR) issues etc. and has been involved with many activities, conferences on "Law & IT".

Understanding the importance of ethical conduct and integrity and witnessing the large number of instances of persons with eminent academic and professional credentials, who have transgressed the law, he has designed this unique course- probably the only one of its kind.

His past roles include being the Former Pro-Vice Chancellor, Indira Gandhi National Open University (IGNOU) and being on the faculty of IIT, Kanpur (the premier engineering institution in India), MLNR Engineering College and Faculty as well as Visiting Professor, University of Western Ontario, Canada. He has been a Visiting Scientist at European research centres in Italy, England, Germany and Sweden.

Prof. Pant is the founder of the **LMP Education Trust**, an organisation that promotes new age learning and supports underprivileged learners.

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