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*Globalization: Opportunities & Implications for Higher Education in
India*

Speakers

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Dr. Sugato Bose., Gardiner Professor of Asian History, Harvard University
Dr. M. S. Vijay Kumar, Senior Associate Dean, MIT
Dr. Narendra Jadhav, Member, Planning Commission
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The Conference highlighted the need for expansion in higher education and improvement in its quality and its relevance, to provide opportunities for the large number of young in India's population. This in turn would have implications for the overall growth, prosperity and development of the country. Innovations in the existing system were thought as imperative to achieve this rapid expansion and improvement in quality. Reform of the regulatory structures including some of the current reforms that are on the anvil, greater autonomy to institutions, role of foreign and private players, were some of the issues discussed in the inaugural session. Need to find ways and means to increase the Gross Enrolment Ratio (GER) which is currently woefully low by not only global benchmarks but also by Third World standards. The issues of access to and affordability of higher education need to be addressed in a wholesome, holistic manner to ensure that the quality of process is enabled via well-trained good quality faculty and teaching and quality of product.

Specific opportunities for partnerships between Indian and Foreign Education providers were discussed. The context of Indian higher education was set out - namely the growth trends and governance mechanism in the present system - to highlight the needs and constraints in the existing system and the requirements of a future more streamlined model. It was discussed that collaborations would be successful only if partnerships could develop between institutions which are a right fit for each other. Different categories of foreign institutions seeking collaboration would have different needs and objectives, which would have to be matched with the needs and objectives of Indian institutions. This process of finding the right fit for individual partners, for different categories of institutions, would be critical in determining the success or failure of the collaboration. Indian and Foreign Education Providers spoke of their aspirations for such partnerships and current level of engagement. rough the availability of good quality students, who are highly employable, improves dramatically. Points that came through --

- Mere enabling of the Foreign Education Providers Bill is not likely to see the arrival of top Ivy League foreign institutions in India.
- The top ones will still see significant overseas students seeking admissions to their primary overseas campuses because such students are seeking a rich overseas diversity in their learning experience which will not be available in the secondary campuses that may come up in India
- Courses of study at secondary campuses are expected to be priced at a lower price point and may therefore tend to attract students more from the SAARC, Asia Pacific, African and Latin American geographies. Of course, such courses could also attract students from the USA, UK, Europe etc who are keen to obtain an India-focused learning experience
- 100% FDI in education has been permitted for quite some time now, but there has been no significant paradigm shift in terms of 'action on the ground' interest by foreign institutional or financial investors. Also, the tenacious issues of 'not for profit' and 'for profit' need to be carefully, comprehensively sorted out at high priority as, at the end of the day, these would have a critical bearing on the demonstrated intent of reputed institutions on their plans for entry into India
- Different models of collaboration with foreign educational institutions though currently in practice, do not really add value to the higher education sector in the country except for cosmetic appeal to some interested constituencies.
- The final session focused on technology platforms to provide an opportunity for collaboration and to bring in a fundamental innovation by which students and societies learn. Open education reso Recap of Presentations

Transcript of Presentations

INAUGURAL SESSION

1. Ambarish Das Gupta, Chairman, AMCHAM Kolkata/Director, PricewaterhouseCoopers Pvt. Ltd. (PwC)

An India that is currently examining issues around inviting foreign universities to this country to shore up Indian education standards, especially around higher education would be well advised to recall its history in terms of globalized education. The Indian universities of yesteryears, Nalanda, Taxila, Vikramshila, were among the most unique seats of learning ever, towering repositories of knowledge, learning and teaching principles certainly older than the European universities and the founders of the concept of global education. The guru of the gurus, Shilabhadra, who sacrificed his kingdom in pursuit of his zeal to teach, came from this part of the country and became teacher to the redoubtable Hiuen Tsang.

Some 200 villages were gifted for the formation of this institution that had teachers from the world over who taught for free, living off food that was given to them by members of the community; it had the famous *Dharma Gunj* (Mountain of Truth) or *Dharmagañja* (Treasury of Truth), as the library was called, with three main buildings, one as high as nine stories tall, *Ratnasagara* (Sea of Jewels), *Ratnodadhi* (Ocean of Jewels), and *Ratnarañjaka* (Delighter of Jewels). They represented one of the finest collections of manuscripts and books ever. In terms of the progress of civilization and dissemination of knowledge there could be no better institution. It taught, history, philosophy, the Vedas, medicine, religion...They looked upon education as the basis for civilization to progress. They attracted people from all over the world.

It is another matter that India could not hold on to that ancient heritage of excellence in global knowledge dissemination and the European universities, focusing more on dialectics and logic, acquired leadership in terms of global education and gave university education the current shape. Even later the American institutions such as Harvard and MIT that had a more practical approach to teaching, changed the face of education, making it more earnings driven and took advancement of civilization to a different level.

India that pioneered global education is now opening its doors to global education to come and open campuses here. Hopefully, the deliberations today, with intellectuals, thinkers and global leaders in education as well as the user communities, will throw some light on what would be the ideal platform of policy and patterns for India's alliances and integration with global universities.

2. Dr. Kaushik Basu, CEA, Dept. of Economic Affairs, Union Ministry of Finance and of Cornell University

Having done well by higher education in the first two decade of independence, India is today in the cusp of higher education, having done not too well in the recent past. Yet India can be a hub for global education and research... This goes well with an economy that is doing well and we hope that things will be turned around in the business of higher education as well. I am passionate about higher education and research and we need a critical mass of people in this category for whom the status of higher education in the country must click. Where intellectual activity is high, economies do well and India can do well if it can make this happen.

I entered the field of research inadvertently; as a middle class Bengali I was expected to study physics or mathematics by my father who had in mind an ultimate career in law for me. I wanted to study nothing and economics was a via media. Also, I was sent to the Delhi School of Economics because Calcutta was troubled in those times. It was, however, England, at the London School of Economics, where I understood the power of higher education. What began as a flirtation with economics was influenced by the phenomenal intellect of Marty Sen, whose breadth of intellectual power convinced to become a researcher in economics from planning and not get into law as my father wanted me to. Research feeds into economics in many ways.

India's achievement in education is remarkable because it did so well with its higher education since independence and so badly with basic education. Most countries have a pyramidal structure with a large base of basic education and people coming up from that base into higher education. In India we have a huge number of people without any primary education, worse percentages than Latin America, Myanmar and even Sub Saharan Africa. Tanzania's per capita income is half of India but it has a literacy rate of 72 per cent. India's was 65 per cent (last census). India's performance on higher education can be attributed to its founding fathers, particularly Nehru, who was personally keen about higher education.

At the time of independence there were 25 universities, today we have 381, growing at 10 per cent per annum. In the 50s we got the IITs; in the 60s we got the IIMs and they became world famous institutions. In fact there was over investment in higher education, leading to great deal of unemployment amongst the engineering graduates, till the software/ IT revolution took place and India was ready with this glut of educated people. Curiously, as a paper produced by Harvard points out, this higher education did not translate into higher GNP because there was no demand for higher educated people. Such people got absorbed in government, which does not lead to direct increase in productivity. It was post reforms in 1992-93 that India blossomed because of its manpower base in higher education that found a market.

If we do not keep this up trend in higher education – of course primary education is a must – we will pay a price. There is a lagged causality between education and growth and we do not take action in advance... if we ignore it now we will pay for it 15 years hence when we cannot do anything about it. It is important to invest in higher education continuously and ensure that India maintains its intellectual stature. Today, I can go into any international meet and, from amongst the developing countries, there will surely be that critical mass of Indians who people who can hold their own in any global intellectual dialogue.

That is beginning to falter and there are some telling statistics. Take our gross enrolment rate (students in the 18 and 23 age group who should be going to universities); it is currently 12 per cent in India. It is rising but slowly. For China it has exceeded 20 per cent; in Malaysia it is 39 per cent. Most countries were behind India and they have overtaken us... even Brazil has overtaken India today. This is one indicator. Take another: the number of foreign students coming into India and those going out. Those going from India are 10 times the number of those coming in. India could certainly become a global education hub and we need to see what changes are needed here as the world changes, styles of organization change. There are dramatic changes in investments in education in China and in innovations there. Korean universities are making huge contributions to Korean innovations today. The global university system has changed. I wanted to patent a Sudoku idea and called the university patent office in the USA and they agreed to send a patenting officer to discuss the process. It is another matter that the idea was not patented but it shows the proactiveness of the university in the generation of ideas.

India has to reorganize itself. I chose Indian academia because it represented certain values and it is not easy for me to suggest that we change the system. I am suggesting that India become a provider of global education, not for charity but as a commercial proposition. That money generated through higher incomes from higher education can be used to spread education and higher education to take India's gross enrolment ratio to 40 per cent. Industrialised countries have 70 to 80 per cent GER. It is possible to achieve this 40 per cent but it will need money. That can be had through flexibility in terms of pushing up tuition fees. In the USA, you need \$40,000 to \$50,000 for a university education plus living expenses. In India, if you charge \$25,000, which will be a huge fee for Indian universities but a very good deal for American students. You will need collaboration with a very good university even if not the absolutely top ones. Cornell has a tie up for a medical school for Qatar that is paying rich dividends for Qatar and Cornell. So students coming to India can save \$25,000 on education that, over a four-year period, will mean a \$100,000 saving, which is a huge sum. Students will come from Third World countries if you have good collaborations – do not right now compete with the top universities – you could do so in 10 years.

What kind of students can you expect? Some go to the USA for education and some for the job market. The latter category will not want to come to India but think of an American student, who cannot get admission to the best university in America but can come to India and get the education and get a job back home. We can cut into European and American students who will save a huge amount of money on getting a good education. I have discussed this with people and some of them wonder why I want to spend our precious resources to spread education round the world. First, I do not think the educating the world is a bad idea. But it also makes very good commercial sense for India because it would make a huge profit even out of the reduced spending of the American or European student and that extra money can be used to shore up the entire education infrastructure and convert India into an education hub.

Like health tourism, education tourism can become a reality though a little long one – for a four year span. But that would need certain changes in the infrastructure. We need good hostels, steady power supply and, more importantly, a four-year visa for the student coming to India. We cannot say that we will give you a visa for a year and you check with us after a year. So there are changes in the decision making structure and if it can be executed it can make a lot of difference. There is also a case for bringing in private money and what I have to say here will not please many.

I liked the way the Delhi School of Economics was when I spent 17 years there. Rickety chairs collapsing, no air-conditioning...yet it was lovely, non-hierarchical, flat salary system; it was wonderful. Can that work now? The flat salary system for the 400 universities in India, given the way the world is moving.

USA started a sports league sort of practice by bidding away leading professors and researches by offering special deals for the best minds. Britain followed suit and even China has done it. We cannot go that far but we cannot possibly continue to run 400 universities on a flat salary structure. It is not fiscally possible even for the USA to do so. What you minimally need to do is to categorize them as universities of excellence and ordinary universities and pour greater money in some of them and not equally into all. If states are forced to run all universities at the flat scale they will have all mediocre universities. The alternative is to allow private money into education, though that is a touchy subject in India. I believe that there is no alternative to some private funding. Once we become the most powerful nation in the world, we can change things back to what they were. But we are not that now and we need private money.

This can be done in two ways; many American universities are private but not-for-profit universities. But what about for-profit universities? Should a university run like an automobile shop and make a profit. It may not be a world that I like but I feel on balance that we should allow it. USA has universities for profit such as the University of Arizona, Phoenix, which has the largest number of students. When I wrote about it in a

magazine an angry reader asked me if I would send my son to a for-profit university. I would not, but there are many universities to which I would not send my son to... should they be closed down? So what we personally want should not become the basis for such judgments. I don't think a for-profit university will be a good university but it could be a moderate university; so be it. What it should be is a transparent university. It cannot admit students and then hold them back. What we have now is privatization through the backdoor. That should change; we should be open about it and should lay down the parameters...

The question is will private money solve the problem of higher education. Certainly not. Higher education has many disciplines into which private money will not go. The pure sciences, for instance, with very little commercial value, fundamental mathematics, literature or history...an enriched society need all this to be a vibrant civil society as in Greece some 300 BC years ago. The society that could produce Pythagoras's theorem that had no commercial value then but enormous value now. Had he patented it for the next 2000 3000 years he would have been very rich. While there was no commercial application then, society still produced it in a world peopled by the likes of Socrates and Aristotle. I want such a flowering of ideas here. For that we need the state to invest money and it can do so if some of its investments are freed up by private investment so that it can invest in these fundamental pursuits and on primary education.

Even though this is a forum for higher education, I must talk of primary education even if for a minute. That is a dismal scene in India. Some of the numbers may be dated but according to a research that I conducted in the 1990s, India had 50 per cent literacy – literacy is very, very basic for any economy. What was worse was the way the literate population is distributed. If every household has one literate person, the rest of the house has some access to literacy. In India, 36 per cent of the households were illiterate, which meant that the entire household had no access to any form of literacy. Isolated literacy makes the situation even more dismal.

The last decade has seen some major improvements in literacy performance but not because the state has done something good. It is because the economy was booming and a lot of people thought it education was important.

Responding to question:

I do believe that 90 per cent of education will be in the not-for-profit space. I do think, however, that we can open the for-profit window that is currently prohibited under a Supreme Court ruling. I am not saying that for profit will be a very good university; it may be a university for poor, rich students, who can afford to pay high fees for education. However, if they take out this burden from the state universities, funds may be released for other worthwhile work. Again, I do not necessarily believe that good corporations investing in education for profit will put up a bad product. They can make

profit and make a good product. However, it will, at best, be a small window that could be opened up.

3. Dr. Sugato Bose, Gardiner Professor of Asian History, Harvard University

In October 2009, my mailbox was filled with self congratulatory messages because Harvard had once again been rated the best in terms of social science and research by the Time Higher Education World University Ranking for social sciences. The ranking may not be sacrosanct but the list of the top 50 universities is indicative of the quality of universities and that gave me two concerns. The uninterrupted occupation of the top position by Harvard could lead to a sense of complacency and, more importantly, there were no Indian university in that list that said much about the state of social science and research in Indian universities. Beijing University was 21st, Hong Kong was 34, Fudan was 40, Tokyo was 16, Kyoto was 29, National University Singapore was 20, and Seoul was 30. Recently, I saw what the National University, Singapore, was doing in terms of attracting students and faculty. Not only is India nowhere in the global list of best universities, the number of social science citations of Indian scholars is falling and India is losing the race to China on this score by a long run. Yet Indian social scientists abroad are doing remarkably well though the same is not true for Indians in Indian universities.

While our performance on the primary education sphere is dismal the record has been improving over the last decade after being very poor in the first 50 years of independence. In the field of higher education, we were doing relatively well but have left much to be desired over the last 10 years. This is not because of a paucity of talent but because individual talent is not being harnessed by the intellectual infrastructure of India's higher education system. India can never be a globally competitive fount of knowledge without a dramatic overhauling of the universities and research institutes. Knowledge, just like freedom is intrinsically valuable and has instrumental benefits in enabling the pursuit of our development and economic goals. Without a strong foundation in the social sciences and research and their application in the real world, all the talk about inclusive growth will remain catch phrases. The younger generation must realize that social sciences matter and we are in danger of overspecializing in technical, especially IT, areas and one must realize that such a bias does not always lead to well rounded personalities and we must nurture liberal arts education of the highest quality. I went to one such institution, the Presidency College, which has since been in a state of terminal decline for 25 years. It is important to revive such institutions because even technology institutes such as MIT have a strong focus on social sciences and we have MIT producing Nobel laureates in economics. Why cannot Indian universities think like that and invest strategically in social sciences and humanities as well? It is important to capture the interpretative and qualitative contributions of the social sciences. India has a long and distinguished intellectual tradition of being curious about theoretical innovation in different parts of the globe in different parts of the globe and

empirically comparing with other parts of the world. Such connectivity with social sciences has renewed salience in the contemporary phase of globalization. The bulk of the research in social sciences must be carried out in universities and social science departments and state governments must respect the autonomy of academic institutions and play enablers without interfering.

Universities have to encourage time spent on research and promotions must be based on the quality of scholarships. The funding can come through the Council for Historical Research (for history for instance). The funding available today is woefully inadequate and mired in bureaucratic red tape. The private sector can augment such resources but must not attach strings to scholarly endeavour. It is relatively inexpensive to attain excellence in the humanities through investment in human resources in comparison to funds needed for experimental natural sciences with their laboratories and sophisticated equipment. While that is very important, there must be some strategic investment in social sciences that will make a very big difference. Huge strides can be made through effective partnerships between Indian social science institute and centres of excellence overseas. Dr Manmohan Singh has said that persons of Indian origin can contribute to advances in global knowledge from India and abroad with technology having annihilated distances.

Finally, we need incentives and rewards for outstanding research to encourage young scholars. The private sector can play a role in this. Much is made of international awards for such scholarships and Indians are starry eyed about them. Why can't we have Indian awards to recognize contributions to social science and research in other fields as well such as mathematics or physics and other natural sciences? Then again, India should not become a site for field work for social scientists from overseas it must become a site for knowledge production. A bold set of reforms can help achieve this. Reforms are on the anvil but one is not sure that they are properly thought out and can enable the achievement of our goals.

We did have such universities as Nalanda that were hubs of global education and we seek to become such a hub again. One finds the Foreign Universities Bill in Parliament but one does not find it addressing that issue. It provides for global universities to open campuses in India under certain conditions. It must be recognized that the top universities will not open campuses in India or anywhere for that matter. In the contemporary phase of globalization - which has a long history from the archaic and medieval periods, when Nalanda flourished and students came here from South-east Asia, Korea and China; remember, Nalanda did not go there, students came here. Bologna in Europe did not go anywhere; wandering students went there. Bologna did not transplant itself - it is far more important for India to improve its universities so that the best of universities are encouraged to go in for partnerships with them. That will help make India a hub of Higher Education; attract students and the best faculty.

Why is the USA a leader in higher education today? It is because it attracts the best faculty in the world. I can teach with Amartya Sen for instance. There are too many impediments in India to attract students and teachers. We have to expand scales both in terms of equity and excellence; equity in terms of primary education and through affirmative action for the historically disadvantaged people – not caste based reservation – even as we seek to build universities of innovation – there are 14 of them planned. Universities cannot be for compartmentalized education: those would be schools. Universities should be comprehensive. When we talk of new universities, we may just be talking of new infrastructure – may be good – and contractors will make money but insufficient attention is being paid to human resource by our human resource ministry. Who will be the faculty in the new universities? Some may even worry if bringing in foreign faculty may take away jobs in India but that will not be the case. You will need qualified people to fill the faculty position to take you through the phase of reforming the higher education sector.

I do not oppose the Foreign Universities Bill but that will not make India the hub of global education in India. We will need to focus on the existing institutions while expanding. China is doing this while planning to have seven universities of excellence but it is seeking to make the old and established Peking University one of them. We need funds to revive the glory of the old universities of Calcutta, Delhi, Madras and Bombay even as we open new innovation universities. That is how we will attract scholars and students.

There is the other issue of having one regulatory authority to replace the UGC and I see it as a consolidated overseeing of functions of various entities in Delhi. We are all familiar with the Medical Council scam. However, this may lead to over centralization and destruction of creativity and innovation. Mr. Yashpal has publicly expressed his concerns. That would be very wrong. The success with higher education in the 50s and 60s was born out of a spirit of intellectual freedom and Dr Meghnad Shah indeed wanted even nuclear science research to be conducted in the universities. Homi Bhabha differed and Nehru went with him but even in USA much sensitive research is carried out in universities even with fundamental sciences with state funding. That is why America is in top of the world in terms of scholarship. It would be a grave mistake to have an over-centralized monolith in Delhi that will not allow regional creativity and growth. We need to examine how we will negotiate the relationships at the global and local levels as we consider higher education reforms and we need an informed public debate before the law is passed.

I agree with most of Kaushik's suggestions on attracting private funds but I emphatically disagree with his suggestion on for profit universities. There may be a handful of for-profit American universities but we have had a successful model based on Harvard and MIT. There must be a line separating education and commerce at a

philosophical level through there can be a fruitful relationship between education and commerce that must be mediated through philanthropy. Not for profit should be our goal and we will be successful in attracting private funding for higher education. I am hopeful that India will become the hub of global education in this new millennium.

3. Dr. M. S. Vijay Kumar, Senior Associate Dean, MIT

The commitment to the cause of higher education in the networked world and to discussing the problems associated with them is reassuring. When I was first directed to future studies in education there were not too many institutions that one could go to, UMass was one and it had Alvin Toffler on the board (and my I 20 came up first from there) and I went there. The concern then was creating preferred future of education and we looked at the alternative futures that we could collectively come up with. America then was welcoming of new ideas and programs, people, thoughts and innovation; which was its redeeming quality while India was not as accommodative about such notions. Of course there were obstacles to new thoughts around education planning everywhere. Yet openness came with its disruptive effect on education innovation in terms of networked enabled open education and opened up transformative opportunities; forcing a shift from the hub and spoke arrangement to a distributive transformation.

While it was nice to talk about openness it was important to achieve an openness movement and indeed in year 2000 MIT committed itself to making the movement possible by putting all its courses on the web, free for the world for purposes of education. This was good but it was just a pebble thrown into the education sector but what followed was that the Open Courseware Consortium with some 200 institutional members and 6000 courses, all of which was available on the web with MIT, Yale or India's Ignou and Israel's Open University bring about a gathering storm of resources. IITs and IIMs in India made available their courses for the web, leading to a dramatic movement of people sharing education resources in the expectation of making their education visible to the world. Thus the business of openness informed the change in discourses around education and it became the key strategy for the advancement of education. Unison had an open education suite; President Obama supported it for America's vocational training needs. India's National Knowledge Commission had a whole set of recommendations around it and sought to leverage open education for advancing scales with quality by intelligently combining physical and virtual elements. The premise in all discussions was that we had to upscale education for the needs of every sector - not just engineering - it would not do to replicate current institutions, forms and structures but enable rapid enhancement of scales with quality. The quality of output from the mushrooming institutes did not allow them to go to the higher level of education not to meet the needs of industry. India needed relevantly qualified people.

Despite global initiatives around open education, privately funded in the USA with England following it was important not to miss the opportunity for transformative change and those who were taking these initiatives were asked to step back and think about how these initiatives could become transformative in nature. Their feedback and thoughts provided material for a book that is available on the MIT site, which deals with the three dimensions of openness. Open Technology that things can be transferred and interoperate and not break down; Open content: resources can actually be shared and made visible; and Open knowledge: the quality element in knowledge sharing, which meant that while there was a lot of material from a variety of sources, which may be good but not enough. They were necessary conditions but not sufficient.

People who teach know that pedagogic knowledge is difficult to share. We needed to think about that value proposition for transformative influence. There was much intellectual engagement when MIT's open courseware was relaunched six years ago it was welcomed by millions of hits to the site and wonderful commendations; one saying that MIT should get the Nobel Peace Prize. The real dimension for change was evident when a Nigerian student said that he could supplement his engineering course material with MIT course ware or an Australian professor saying that he remodeled his course on the basis of what MIT had put out. This is what increased the quality quotient of the exercise by providing good education through a good model of education and good syllabus.

Openness is not new though. Nalanda was based on the principles of openness and sharing of knowledge in a university without walls; MIT humbly acknowledged that what it did was to organize a great bandwidth of interaction between great students and great teachers. It did not set out to engage in distance education. It did what it did best. It influenced curriculum as it did earlier through partnerships and today through use of technology. Thus open education is about applications, legally enabled creative commons and an end-to-end process in open education.

In India, I was dismayed when I sensed that there were attempts to replicate correspondence courses on the internet in an effort to expand education. Such cloning would not solve the problems. One has to do things differently because quality education is about first-hand experience. Labs, for instance, are a part of the experience. I Labs provide that experience to students from MIT and Bits. Openness with technology is about bringing first-hand experience with the same facility as in the situative learning experience.

By and large laboratories are expensive and underutilized. Configuring time is enormously disproportionate to their use. There is also great latency; you have a theory today and a lab two weeks from now that finishes the idea. This 24x7 access to labs to students from Singapore to Sweden at the same time enables a community of learners to

share its perspective on interpreting results. This has profound implications; multiple perspectives to a problem are invaluable.

Openness then offers new light to the persistent problem around quality education. Quality of education and access to it are not India specific problems though scales are dramatically magnified in India. Therefore, we cannot afford to think of education in the business as usual scenario. There are too many people outside the pale of education in India and there are those in the education system without engaging with education. India has a problem of both numbers and quality and Openness can help address that. To borrow from Sir John Daniels concept of the iron triangle of access, quality and cost which is supposed to be immutable – if you increase access, you reduce quality; if you improve quality, you increase costs in what is an insidious relationship – openness can offer real opportunities to render the immutable triangle flexible.

MIT also has a notion of visiting committees that engage in advocacy and advice. Not only can academics share research, they can also share pedagogy. When a professor puts his stuff on the web he invites critiquing and received feedback that helps him change and evolve. The entire process then gets imbued with openness in a blended, boundary-less system of global education. Blended and boundary-less not just in terms of geographies but barriers between disciplines and between research and education being broken.

Openness also allows communities to participate in the process of education. A lot of translation and interpretive work is done by communities and we need to understand how that can be leveraged for expanding education. The question is how ready are we for such transformative change; not just in terms of technology but in terms of our culture to take constructive advantage of the opportunity to move with this kind of a vision. The MIT president, Chuck Vest talks of a sea change happening here without an preferred destination or a preferred provider of education but a networked world leading to a networked university; a transcendent, accessible, empowering, dynamic, community constructed framework of open material and platform on which much of higher education for the world can be constructed.

5. Dr. Narendra Jadhav, Member, Planning Commission

There are metamorphic changes taking place in the field of higher education that will overhaul the system and reform it dramatically. India has about 500 universities and 26,000 colleges, 3000 for women, with an aggregate enrolment of 15 million and a faculty of half a million people. These are big numbers. The mainstays of higher education in India are the state universities. Of the 500 universities, 243 are state universities with a large number of students and affiliated colleges. Pune is the largest amongst the traditional universities in world in terms of student: 650,000 and 600 affiliated colleges. Many state universities have cast numbers of students, some two to

three lakhs each. In technical education we have 8568 state funded colleges of which 2388 are engineering colleges, 1659 are polytechnics, and there are management institutes. Around 2.5 million people are enrolled in technical education, 19 lakhs for degrees and 5.1 lakh for diploma. They constitute 16 per cent of our enrolment in higher education

India's GER is 12.4 per cent which is very small even by the standards of developing countries. It is half the world average of 24 and two third the average of developing countries, which is 18 per cent. Not only is India a laggard in terms of overall access to education, if one breaks it down to rural urban, male female, scheduled castes, poor-non poor, the minority etc it is truly shocking. The scheduled tribe women have a GER of two per cent that means this large segment of our population have virtually no access to higher education; leave alone quality higher education. Thus in terms of distribution we are shamefully behind world standards and this is cause for serious concern.

Higher education is faced with three major issues:

Quality: the curriculum is out of date

A discomfotingly large number of teachers are unaware of developments in their own subjects

Anecdotal evidence suggests that research output from Indian universities has not been growing either in quantitative or qualitative terms. Until 1984-85, China and India were at par vis-à-vis their output, today China has five times the number of research papers published in international journals.

NAC, the National Accreditation Agency that was formed in 1996, has been able to give accreditation to less than 20 per cent of the universities and, at this rate it will take another 50 years for it to complete the accreditations. So quality is a major concern.

The second concern is employability and the best we have from surveys is that one third of our engineering graduates are not employable and that there is a rift between industrial and societal needs and the kind of education that we are providing. This raises questions around the relevance of higher education with some surveys saying that two thirds of our engineering pass outs are unemployable. This applies to other disciplines as well. Even if a good student passing out of a good institution and finds a job needs 8-10 months of on the job training by the management before becoming functionally useful. This should not be the forte of the company. This should be the forte of the institutions offering the education. Therefore a lot needs to be done and we are falling behind on all fronts. Only now are we realizing that education and skill sets hold the key to the future especially when we are looking at a double digit growth. The worry is not that we will not achieve that growth; we will overcome the 10 per cent barrier but the question is if we will be able to sustain it. The worry is that we will not unless there is an overhaul of the system.

The percentage of youth with access to vocational training is two per cent and another eight per cent get on the job training. Thus 90 per cent go to the job market without any marketable skills. In Korea 87 per cent of the youth get formal vocational training. Unless we put our act together around higher education, vocational and technical training we can never realize the demographic dividend. There are several systemic challenges: (1) expansion with inclusion; expansion and upgradation of faculty infrastructure; reduction in the regional, gender, social, income imbalances; promoting distance education convergence, greater private involvement through public private partnerships; permitting entry of foreign universities. (2) Academic reforms including improved curricula and improved systems, semester based classes, credit based courses, examination reforms; competence enhancement of faculty; (3) promotion and upgradation in research; reforms in the regulatory framework.

This would involve giving autonomy to the university, ensuring accountability, quality improvement through accreditation, reducing multiplicity of regulatory agencies, which are the essence of reforms and increasing the effectiveness of regulations; preventing malpractices and providing an effective adjudication mechanism. This means change in the governance structure and this brings its own challenges.

There are five proposed reforms that are awaiting clearance: setting up the NCHER, bill for reforms around unfair practices, accreditation, regulatory authority, tribunals, and foreign education providers' bill.

The NCHER (National Council for Higher Education and Research) envisages comprehensive reforms but no over-centralization. It was drafted after the reports of Yashpal Committee and the National Knowledge Commission on the subject were available. They both said that higher education was over regulated and under governed. There are some 50 regulators. After the reports were submitted, a draft report prepared by a task force set up to convert the reports into implementable structures was put on the web for comments and the draft discussed with university vice chancellor with meetings held in 22 places. The feedback was taken, analyzed and a revised draft made for the consideration of the government. It collapses the 50 regulatory authorities of suspect credibility. The UGC, the AICTE and the NCT (for teachers) will be subsumed under the NCHER. They will be responsible for professional practice once the person graduates. The bar Council will be taking care of graduating lawyers but education in law will be a matter for NCHER. This is not a step towards over centralization but will, in fact, give functional autonomy to the universities. Currently vice chancellors have to run from pillar to post for various clearances from so many authorities. That will change.

Currently there are many malpractices. Institutes claim top rankings amongst their categories. Who is making these rankings? They charge huge amounts for brochures that should be freely downloadable from the net. There are many malpractices that the

draft bill seeks to address. It has been cleared by the cabinet and is pending approval of the parliament. The first thing is to check these malpractices; the second is to ensure accreditation. For this a accreditation regulatory authority is being set up to appoint several accreditation agencies in the public and private sector and accreditation will be mandatory and the rating will have to be displayed on the website so that people can make informed choices. Third, tribunals are being established in the state and central levels. There are so many complaints about vice chancellors that they have to be seen to be believed. Some rubbish but they engage so much of the VCs time. These tribunals will take care of the complaints.

The Foreign Education Providers Bill, it has been said, does not address the issue of India becoming a global education hub. It does not but that will need another major set of reforms in a comprehensive package. The current set of reforms is a very important part of that package. It is also imperative to improve the quality of the education to attract foreign universities because it is felt that good universities will not be attracted to the current offerings. One will have to do both, get foreign service providers and improve the quality of our existing universities. It has been believed that state universities cannot be changed but look at how dramatically the Pune University has changed over the last three years. Today, not only does it attract the largest number of students; it also has 45 per cent of the international students coming into India. Today it finds a place among the top 100 universities in Asia.

It is therefore important to improve the quality of education in our universities and to get foreign universities here. These would not be C- universities for that will be regulated. The other aspect of globalizing education, apart from allowing foreign universities to come is to allow Indian universities to go abroad. Pune University had signed a very valid agreement with partners in the Middle East to start a campus there; the investment in infrastructure would be theirs and they would share 15 per cent of the fees earned with us. It did not happen then but Pune has since overcome the obstacles and is about to start in the Middle East and elsewhere as well. It is possible for Indian universities to globalize even within the existing framework and Pune has shown how. This was possible because as Vice Chancellor I personally signed at least 100 MOUs with leading universities in the world around (1) Exchange of students (2) Exchange of faculty (3) Joint research funded by us, by them or by third parties (4) Actually running programs on each other's campuses.

Initially we were stuck by the regulatory frame work. Today a way forward has been found. Students studying the first year in the Indian university and second year in an American university will get an Indian degree and those doing the opposite will get the American university; from the university of origin. This means enormous opportunity, provided universities get their act together. Some universities have done a lot work and while we continue to be laggards once the metamorphic changes come in there will be a quantum leap in the quality of education. I believe that over the next two years the

higher education system will change dramatically and will help India achieve and maintain its high economic growth.

Response to questions:

Change is being brought in undergraduate and school levels as well. The Right to Education Act is working since April 1. The Rashtriya Madhyamik Shikshya Abhijan is ongoing; and the national skill development mission has an ambitious target of having 500 million people technically trained by 2022. The PM has written to all CMs to work on these with a missionary zeal and the government will invest in institutional framework to galvanize the system into action.

As far as for profit institutes are concerned, we are not ready at this stage but we are ready for PPOs in school education, higher education and technical (IT) education.

As far as achieving curricular agility for engineering institutes, we need to make the board of studies functional and have their recommendations vetted by professionals in industry. The top engineering firms in Pune have willingly come forward to do this vetting because they are at the cutting edge and can shape curriculum effectively.

Raising GER to 40 per cent (as Koushik Basu suggested) seems to be impossible at this stage. The target for the 11th plan is to have 15 per cent and an ambitious target for the 12th plan would be 30 per cent. It would be remarkable if we can achieve it.

What happens to the UGC, AICTE and NCT as the NCHER takes over? They will be subsumed in the NCHER if the bill becomes an act by next January. There is a proposal that the UGC will be allowed to exist for a few months to ensure smooth transition but the others will be closed down.

The Foreign Education Providers Bill is a small beginning towards a big change. When it was introduced earlier, it could make no headway. Today we expect a limited entry. As far as the appointment of Vice Chancellors is concerned, the states are worried that their right to appoint VCs will be taken away. Currently, for state universities, there is a search committee that identifies prospective candidates, five names are selected and sent to the governor who chooses in consultation with the chief ministers. But for most other institutions there is no check and we have an undergraduate as the vice chancellor of a medical school for instance. That will stop. We will have a National Registry of people from where the universities or states can select their Vice Chancellors. Private individuals may apply and will be vetted by NCHER and if cleared the names will be included in the national registry. No one can be VC unless that clearance is obtained. The National Registry will be substantial list and one can choose according to one's needs but one will have to select from that enlisted panel.

SESSION II: HIGHER EDUCATION - PROBLEMS & CHALLENGES

6. Prof. Ashoke Ranjan Thakur, Vice Chancellor, West Bengal State University

There are a couple of points that need to be reconsidered while we establish a road map for higher education. Most of the committees set up for this purpose earlier did not have a representation from the states and though there is a promise to do things differently with the National Commission for Higher Education, we are worried about over-centralization with seven wise men telling us what to do. The second worry is that we are a year away from the conclusion of the 11th five year plan that had a target of 15 per cent GER and we are still talking of 12.4 per cent. We should be realistic about making these leapfrogging statements otherwise we will prove, as Kaushik Basu said, to be a lie that statement “where there is a will, there is a way”. So we have to have a clear idea of the road map and how to negotiate the journey without forgetting the shocking .2 per cent of the women in the scheduled caste category who gets included in the education process.

Fortunately, in my current capacity, I have come across first generation students who are eager to learn and they are ready to grab technology. I am happy to hear about the boundary-less concept of learning and blended education. However, it has to be clear that technology enhanced learning must lead to an understanding and not be another note-giving correspondence course kind of a program that passes for distance education. This change is yet to come although we have the capability. This must include technology education that is unfortunately becoming poorer. There is thus an immediate need to get the perspective right, making the roadmap clear to us and pushing on with the agenda.

There are also issues around private funding and collaborations. In terms of twinning or exchange programs, even for a small university such as ours, there is nothing in the regulatory regime that can stop us, say from having an exchange program with the Pune University. Yet we were told that we could not do it. The Vice Chancellor of the Pune University, Ashok Kolaskar and I did a search of the UGC provisions and found that there was nothing that could stop us. So we decided to go ahead and do it anyway and wait for a regulatory clamp down. It did not happen. What did happen was opposition from the teachers who had a mindset problem. It is not easy to sign an MOU and start a program. The problem is to have teachers who will understand and appreciate the implications of the program. For many it is comfortable to take the easy way out; making do with what they have in hand and thinking that it is good enough.

Finally, I have been on the NBA committee and what bothers me is that both the NAC and the NBA permit the exclusive, brand name university to opt out of the accreditation process. That creates a vacuum. If you are trying to administer and accredit somebody you need to demonstrate accountability down the line.

7. Prof. Ajoy Kumar Ray, Vice Chancellor, Bengal Engineering & Science University (formerly Bengal Engineering College) and who was earlier Head of Medical Sciences at IIT Kharagpur

Globalisation in education in contemporary India was started in the truest sense by Rabindranath Tagore. He set up the Vishwa Bharati and invited students and faculty from all over the world to come there. He sent his own son Rathindranath and another scholar to the University of Illinois to study agriculture that he knew would be very important for India. Was Tagore subjected to a regulatory regime? No. He allowed people to teach creatively and it was that university that produced a Nobel Laureate, Amartya Sen. The point is that knowledge does not need to be regulated. The best universities in the world have minimal regulation and a great deal of academic freedom. One is not talking about the mushrooming fly by night operators that should be governed under the standard laws of the country. For the state and government owned universities though, there should be freedom and a change from the regulatory regime. I have sent our Vice Chancellor a list of such changes that we need to be able to work effectively.

Globalisation of education implies a boundary-less knowledge, where disciplines interact with each and complement each other as they grow. Today technology makes it imperative for science and engineering to work together. Healthcare along with science and technology will see the highest growth in the country and will have to be allowed to grow naturally.

In biology, for instance, technology enables molecular imaging that, in turn allows us to see a disease coming and enables prediction and prevention of a disease. It allows examination of the individual cells that make up the tissues and enables us to examine how they integrate and evolve. Education may be likened to that; society evolves with the integration and evolution of societal cells that impact on the evolution of knowledge, amongst other things. A certain critical mass of quantitative change evolves into a qualitative change... water is liquid till it exceeds 1000 Celsius, when it experiences a qualitative change. The point is that the country is in the midst of quantitative changes around education and they must be allowed to reach the tipping point when they will lead to qualitative changes. This change can only come if there is autonomy that will allow such changes, not restrictions.

One uses the word autonomy with care for in this world of knowledge autonomy automatically implies responsibility. Such autonomy was given by the founding fathers to the Kharagpur IIT, for instance and the professors were allowed to teach what they want and allow the curriculum to evolve in keeping with the advances of knowledge and not be tied down to an initial curricula. This is the mindset change that all university faculty need in this country today. They need that freedom and not restriction.

The larger question is: who regulates the regulators. Dissemination of relevant knowledge is a complex process of new knowledge feeding back into the system and this mechanism needs freedom. This happens in others spheres of life too. Liberalisation set Indian enterprise free and allowed companies to take risks, innovate and grow. In academic too, one has to allow the spirit of individual freedom to flourish; not make them conform to a set of uniform laws. In fact, non-conformity should be the essence of academic excellence.

Hopefully, with informed debates such a state of freedom will come to our universities as we try to catch up with the frontiers of higher learning.

8. Pawan Agarwal, IAS, Principal Secretary, Government of West Bengal & Author of the book, *Indian Higher Education: Envisioning the Future*

While referring to growth trends, Mr. Agarwal pointed out that the growth targets in terms overall enrolment both for the Eleventh Five year Plan at 15% GER and 30% GER for 2020 will easily be reached. He noted that private sector particularly in engineering and management education significantly contributes to this growth. He shared some negative consequences of this growth, namely - continuing mismatch between labor market and graduate output, increased incidence of indebtedness, poor quality of graduates with either no skills or narrow skills sets. To address this problem, he suggested that the focus should be on new degree structure and less expensive programs. Overall, rather than looking at growth targets alone, there is need to understand the nature of growth.

Referring to current arrangements for governance with British legacy that cater to a primarily a public system, he pointed that it is currently out of date. Multiple bodies set up from time to time have created large gaps and overlaps. Referring to the ongoing flurry of reforms, he expected major corrections would take place. However, there is a risk that multiple laws could result in fragmented approach to regulation of higher education. He advocated that the country needs an umbrella higher education law that defines various regulatory instruments and relate them to each other. Proposed National Commission for Higher Education Research if formed could undertake coordination function rather than itself becoming an overbearing entity. In his closing remarks, he mentioned that putting together a state apparatus for increasingly complex. The Indian scenario is typified by examples as obtained in Kolkata(2009) with a projected shortage of 1,30,000 skilled people by 2015 in West Bengal but with 10 lakh applicants, including many graduates and postgraduates, for 4, 013 posts of peon in the state government.

It would be essential to focus on nature of growth and its implications → Create right incentives for private sector to improve quality → Get the governance right both for public and private sector to grow

Some of the figures are telling in terms of the size of the possible growth and its implications

Enrolment: Year 2009: 13.6 m GER -12.4 % ♦♦ Year 2020: 30 m GER – 30 %

Institutions: 2009: Universities 525; Colleges 25951 ♦♦ Year 2020: Universities 1500; Colleges 50000

Private sector share: Year 2009 30% 3.8 m ♦♦ Year 2020 50% 15 m 2020

The implications of such growth could be:

- Large private growth: High Cost → Poor Quality
- Large growth in engineering and management: Poor growth → underemployment/low salaries
- The implications: General dissatisfaction → High Indebtedness

The way forward would be

- To regulate the growth regime lightly and encourage
- New finance structures
- Flexible network of Higher Education Institutions
- Diversified and mission-differentiated providers

The overall objective should be enabling expansion of enrolment and programme capacity both in public and private sector

9. Dhiraj Mathur, Executive Director, Tax & Regulatory Services (Education), PricewaterhouseCoopers Pvt. Ltd.

A former civil servant/IAS Officer who changed course to join the private sector, Mr. Mathur said that at the outset there is need to address issues of middle class morality vis-à-vis 'for profit' education' if we are go ahead with the Foreign Universities Bill, which to my mind will remain a non starter otherwise. There is a belief among my former colleagues in government that education is a matter of philanthropy, lofty ideas or altruism. Yet one of the bills introduced is around curbing malpractices in academic institutions. Look at what has been happening in this sector for the past seven months with the scandal around deemed universities, around AICTs and the NUCI. So what noble pursuit are we talking about? People are making money in this sector.

The Planning Commission admits that 50 per cent of the enrolments are in the private sector. CSR and philanthropy have limitations even though Bharti has set up a foundation for education and there are limited number of Tatas and Birlas in the country. The US has a number of 'for profit institutions' that run private colleges and it

would incorrect to say that there is only one for-profit university there. First, comparing India with USA is like comparing apples with oranges. Their higher education system has been built up over several centuries. Ours is just 50 years old. We started off brilliantly, but in the last 10 years a mess has been made of things and there is need to be realistic and to look at 'for profit' institutions in its totality.

What are the downsides of not allowing it? It is happening anyway. Some of our eminent public figures are running private universities and we are making a lot of money anyway. We also talked about the noble pursuit of transferring knowledge. What kind of example are we setting for our children who, at an impressionable age, see capitation fee and such malpractices simply because we will not be realistic. We are losing out on tax revenue and on faculty because of the limitations on salary. MIT gives people as much as a million dollars; MIT and Columbia vie for faculty.

There is a huge demand and supply gap in India in terms of funds and faculty. Where is the money going to come from? The Knowledge C omission talks of having 1,500 universities from the 500 odd that we have today. The government has a liability of Rs. 1.7 lakh crores on implementing the 'Right to Education Bill'. We spend about three per cent of our GDP on education of which only .6 is spent on higher education. Where are we going to get the funds for expansion from? How are we to get even 20 percent gross enrolment rate? I think it will be about 15-16 per cent. So we need to give up our hypocrisy and be realistic about making profits from education because people are making money and it is legal to make money in this country.

Then there is another issue about private institutions not providing quality education. All of us send our children to private schools in India at the junior level and most of them are making money though there are a lot of 'not for profit' philanthropic institutions. My limited point is, given the magnitude of the problem in India, we cannot deal with it exclusively in the 'not for profit' model.

Second, why do I think that the 'Foreign University Bill is a non-starter?

1. How is the foreign university going to be incorporated and funded in India? The Bill, as it is in the public domain, is silent on that. We assume that it will be 'not for profit, a trust, a society or a Section 25. But our AICT guidelines do not allow a Section 25. How do you bring in Rs. 15 crores into a 'not for profit' organisation? You cannot bring it as FDI. FDI policy allows 100 per cent automatic approval and not a single paisa has come into this sector simply because you cannot bring in equity into a trust or a society. (Please have this checked out) You can do it through donation which means you need approval from FCRA, which is extremely difficult. The Act and the Regulation are fuzzy about the issue of incorporation, so how can you set up a university?

2. There is also a misconception that we are only going to target the Harvard, the MIT and the top guys. We do not want the C B or Es or the 'fly-by-night operators. As we heard this morning, the Harvard's and the MITs are not going to come. They might have a Centre for Excellence or a School for Asian Studies but no top-notch university will set up a campus here. They do not need to come because they have enough student interest back home. They have very high standards of quality and autonomy, which is not going to be possible here despite the fast-track mechanism provided in the Bill. So who will come?

If I can explain the spectrum of the education sector, on the one hand you have institutions with research focus of the MITs; on the other hand you have those with the vocational focus of the community colleges of America and Australia. These are the two extremes. In between you have various degrees of research, teaching or vocational focus. Even Harvard's and MITs have undergraduate programmes that are cash cows for them. But their raison d'être is research. In between, there are a lot of B+ or C-institutions that are going to come here and there are half a million Indian students who are going to study there. They do not go to MITs or Harvard's. The bulk of them go to the B and C grade universities. The tier 2 and tier 3 ones. If such institutes want to come here we should facilitate their entry rather than keep them outside the fast-track mechanism and subject them to the full rigours of the Indian regulatory regimes.

The British left us with a legacy of Civil Services and bureaucracy and we made a fine art of it. We need to de-regulate and de-congest this sector. As far as the 'Foreign Universities Act' is concerned, there is competition from Singapore and Middle East. We need to make our regime more attractive.

SESSION III: PARTNERSHIP OPPORTUNITIES - Moderated by Mr. Paranjay Guha Thakurta, Journalist & Commentator

10. Dr. Rahul Choudaha, Higher Education Specialist, New York

It is important to determine the context in which partnerships for international higher education is being sought if one is to have a beneficial collaboration. Without an understanding of individual perspective even high-end alliances become difficult to sustain. The Singapore government had invested \$50 million and the partnership died after 8 years. Yet universities need to form alliances with each other to be globally competitive.

It is important to remember that institutions are diverse in terms of the kinds of students they have. Not every international university is a Harvard or a Yale; 11.7 m students enrolled in US community colleges. Then there are different cultures; some insist on long teaching durations for professors to get tenure-ship, others have a stronger research focus; yet others focus on the profession of education amongst those who will head the institution. 43 per cent of the college presidents are those who earned

their highest degree in education of higher education. It is important to understand why wants a partnership and what one wants for one's own institution before choosing a partner.

One might want a partner in any of the three broad segments: Prestige-enhancing:

Prestige-seeking or revenue/profit maximization: In the USA, for instance, there are the prestige-enhancing (top-50 research universities) institutions that are primarily not-for-profit. They will fulfill the need for enhancing prestige through the international teaching, learning and research experiences for faculty and students. Many of them offer: collaboration, faculty exchange, student exchange, research collaboration, technical assistance and even executive education. Some examples are ISB with Kellogg, Wharton, London Business School and more recently with MIT Sloan or IIM-A with Duke for executive education

There are also the prestige-seeking (next-tier of 100 universities), also, primarily not-for-profit and fulfil the need for prestige and visibility in their prospective partners and thereby lead to revenue enhancement through collaboration, joint/dual degrees, offshore campus such as the National Management School with Georgia State University or the MARG group with Virginia Tech

The revenue/profit maximizing (universities beyond top 150) come in both for-profit and not-for-profit and fulfill the need for revenue/profit maximization through collaboration, joint/dual degrees (not-for-profit), offshore campus (for-profit) such as the Modi group alliance with Western International University or the Ansal Institute with Tarleton State University. One will have to match one's mindset with that of the collaborating university and develop an effective communication network and relevant structures to ensure that trust and quality of education is sustain over a period of time to strengthen the foundations of the relationship.

Giving an example of such a successful partnership, Dr Choudaha talked of the ISB, which was established in 2001, in Hyderabad, India in collaboration with Wharton, Kellogg, and London Business School. It has a student exchange program with a faculty model of 100+ international visiting faculty and is globally ranked 12th (Financial Times, 2010). Dr Donald P. Jacobs, former Dean, the Kellogg School of Management said: "It's unlikely that we will see more than one other business school of the stature of the ISB launched in our lifetime".

Such partnerships not only enhance the quality of education across the world but enhance the personalities of the faculty while developing those of the students. The faculty exposed to new ideas and cross-cultural research opportunities develops professionally while arriving at a better self-understanding. Students participating in international exchange programs were more reflective, more prepared to help others,

more knowledgeable with respect to international affairs, and more self-confident, according to experts, he said.

11. I V Ranga Rao, Executive Director, International Collaborations & Exchanges, Jindal Global Business School

The success of Global Partnership Opportunities in the education space depended on a validated commitment to deal with people, planet, and profit issues simultaneously and not sequentially. Global educational challenges are collaborative opportunities and mastering them will require entrepreneurial thought and action that can enrich traditional business school analytics. These will mean getting out of the narrow sense of new venture creation, but in the broader sense of new ideas, new innovations, new solutions to social problems, and, most of all, new ways of thinking and acting.

Entrepreneurial Thought and Action (ETA) can provide an action orientation to create value-generating opportunities and possibilities for a better world. A committed belief in the power of education is essential to drive change; a purposeful, articulated way of teaching management education and a holistically structured approach to knowledge and action

Education can drive change by producing high impact entrepreneurial leaders around the particularly in the economies and societies where such leadership is most in demand. A fully articulated way of teaching management education can serve as the foundation for outreach to entrepreneurs and educators around the world. A holistic approach to knowledge and action, integrates business with the arts and sciences disciplines to create a comprehensive framework for entrepreneurial opportunity identification and social and economic value creation. One could also action learning, in which theory and real-world experiences are fully integrated in the classroom and the workplace.

Institutional collaborations enhanced institutional credibility, reputation and value; provide access to a shared entrepreneurship curriculum and adapt existing curriculum and pedagogy to local business practices and customs. They can also succeed through a sharing of curriculum and teaching practices with faculty participating in certifiable “train the trainer” programs and with access to a shared resource base. Through shared curriculum and teaching practices, such members will become a pool of global faculty who make it easier for members to open new global locations jointly rather than separately. Shared curriculum and teaching practices will also enable students to spend longer periods abroad at network member schools without interrupting the degree program at their home schools.

Opportunity for faculty to participate in a “train the trainer” process that will result in certification.

Access to a shared database including written material, podcasts, tutorials, and case writing methodology.

The curriculum would include:

- Entrepreneurial processes
- Global perspectives
- Innovation and creativity orientation
- Innovative pedagogy based on cutting-edge learning principles and technologies
- Teamwork and leadership application
- Social responsibility contexts

These programs could be conducted through designated entrepreneurship center of excellence; propagation centers for its specific core competencies that could take a profit center approach, enabling recovery of investment.

Development of faculty capabilities to become effective classroom and online teachers could involve providing practical experience in an entrepreneurial environment, or a combination of both; or creating a state-of-the-art virtual web center for online learning and support.

12. Shino John, Assistant Dean, School of Management and Labor Relations, Rutgers University

Indian demographics present a huge challenge and opportunity with 550 million+ Indians under the age of 25. The problem and opportunity is around educating and skilling this population. One cannot neglect the large majority now in the workforce who are unqualified. This is a challenge that can be addressed through the global service model.

Build on what is already working through

- Innovation at the “Bottom of the Pyramid” - This would involve community-based approaches to entrepreneurship, micro-lending, local accountability of schools
- Leveraging of world-class FDI in areas of IT, BPO, Biopharma
- Public-private partnerships
- Focus on the Kendriya Vidyalaya - Central Government school system for government employees
- Learn from successful skill innovations from high performing states such as the voucher experiment in Delhi or the Andhra Pradesh scholarship program to serve as a bridge to higher education by promote access New freedom of HE institutions to raise and keep private funds

Consider Integrated Learning Centers

- The broad vision of combining the planned 50,000 new Skill Centers and 6,000 new Model Schools
- Chartering schools by day and workforce development centers in evenings/weekends/holidays, thus enhancing capacity utilization and infrastructure
- Involving students and parents simultaneously to enhance educational outcomes
- Co-locate with rural development projects: e.g. call centers, food processing, net cafes, solar power
- Insure local accountability
- Empower Panchayat +/- or peer lending networks
- Provide budgetary control and choice of provider
- Government fund student success, incentives for under-served

For Integrated Learning Centers

- Consider staffing models - where motivated and qualified teachers are not available to supplement them with *Shiksha Karmi* (local para-teachers with Grade 8-12 qualification) who are members of intensive learning and support networks
- Create supportive infrastructure by installing wireless computers with Skype, add broadband video when possible
- Animated learning content - i.e. NIIT's Hole-in-the Wall
- Create open source platform and competition to develop 3,000 modules for distinct competencies in as many Indian languages as possible

Rutgers has various options for collaborative business plan that may involve a cost of Rs. 20-30 lakhs to set up, to be self-sustaining.

13. Dr Murali Nagasundaram, Principal Academic & Head of Learning Experience Innovation & Design, Manipal Education (1st. Part)

When I was doing my PhD in 'Artificial Intelligence', I was suddenly told that the NFS was suddenly withdrawing funding for this and I was distraught, one semester passed... when a professor asked me whether I would like to start a company for computer systems for collaborative work. I worked on that for some time till we ran out of funds and I resumed work on my PhD. A small part of the work that I did for my business project became a part of my PhD and for a while I was the only guy who knew as much about theory as the practical side of this. The point is this that there is certain insularity in academics from business. We do not like to dirty ourselves by associating with industry. The university I was at was not interested in any collaborative arrangement with the company. So I did not finish my PhD there. The faculty had no problems in going out and getting consulting jobs for half or one million dollars but to actually go and collaborate, they would not do that.

There is a lot of value in collaboration because the industry is at the cutting edge and we should involve them in academia. It is helpful to the students. However, industry

tends to have a cutting edge in practice, not necessarily in theory. There is a role for academia to advance theory and there is a role for industry to advance practice. Students would benefit with both these practices coming together. That is the best form of learning; anything that promotes learning.

Concept of partnership is not new. It has been there ever since academia has been there. I am from IIM Joka and in the first year we had some brilliant academics from Sloan to teach us and that is how IMC was set up. One role of partnership between academia and academia is to establish infrastructure, processes and so on. You can have partnerships between academia and academia, academia and industry, academia and government, academia and NGOs. One should not look at it at a structural level. Start from 'what kind of learning can be promoted' and from there start exploring any kind of relationship. Break down all the walls and barriers. Out of collaborations comes creativity, better use of resources, comparative advantages of different institutions.

At this forum we have two individuals who spent much of their career in different institutions, one in the IAS, and the other who has left IAS and joined industry. What a tremendous contribution to society from people who bring from multiple perspectives. There was a company near my last university that was the last manufacturer of D-RAM (computer machines) in the US. Our university did not have an engineering school, so they came in and said, 'here are so many million dollars, establish an engineering school.' So they established an engineering school, hired a lot of high flying professors that became a centre of excellence pretty soon. That is another model.

I am currently dealing with Manipal Universal Learning, which is a 'for profit' organisation and part of the Manipal Group. The Manipal University is a traditional university but India's first private university. The Manipal Universal Learning is trying to explore relationships between different kinds of institutions around the world and we are game for anything. I will give you an idea about what sort of things are possible. One is the Manipal Melaka Medical College, which is an institution established partly in Malaysia, partly in Manipal. Students from Malaysia come to Manipal; students from Manipal go to Malaysia. It follows the Malaysian curriculum. Students spend two years in Manipal and the last two years in Malaysia. There is a separate medical college in Manipal, which follows a completely different curriculum. So there are two different institutions in the same university in the same discipline but running two different curricula.

In Bangalore we have the ICICI Manipal Academy. The Manipal Group has established an institution for the ICICI Group where officers inducted into the institution are trained for one year on the practices of the ICICI. After this very rigorous curriculum they have a job waiting for them. In addition, those who have gone through the one-year programme can optionally spend another year online and once they have taken those courses they can get an MBA, in addition to the certificate they have received

from the ICICI. On the Manipal University campus there is a Hotel Management college that is sponsored by the Welcomgroup. Manipal University and Welcomgroup in collaboration with Disneyworld and the University of California Riverside have established a programme where students can spend some time at Manipal, at Disney and at the University of California Riverside and this gives them a global perspective.

There are numerous such examples.

U 21 Global, which is a part of Manipal Group, was originally established by 16 universities all over the world. Faculty from all these universities established curricula and the whole programme is on-line. Whether on line or off line, technology allows one to explore a wide variety of models for imparting learning

SESSION IV: TECHNOLOGY PLATFORMS FOR COLLABORATIONS IN HIGHER EDUCATION – Moderated by Dr. M.S. Vijay Kumar, MIT

14. Dr. K.R. Srivathsan, Pro Vice-Chancellor, Indira Gandhi Open University (IGNOU)

India's own Open University, IGNOU, has established a reputation of its own, having developed its own robust systems. Its self-learning materials are respected and its Open Distributed Technology Enhanced Learning (ODTEL) Framework has developed appropriate ICT systems backed by services entities for delivering a successful unified E-Learning Framework.

Instructions blend several delivery modes from the conventional: Teacher taking the class uses rich content; Tutored Video Instruction using Recorded Video Lectures (RVL); IGNOU's Self Learning Materials (SLM) and supplementing content; and Web-accessed/DVD based content and interactive study. Instruction delivery is augmented by effective engagement of Learners in pedagogically designed learning activities and supported by discussion fora, E-mail and mobile alert systems, LMS, online self-test and access to supplementary rich web-accessed content and assignments.

The idea is to assure quality education to IGNOU graduates employable and productive on the job and in life while observing real world problems. They are encouraged to abstract the issues and apply what they have learnt and their innate sense to solve them by using multiple modes of engaging learners. The focus is to give them a good foundation around concepts and contextual skills and encourage self-development with responsibility and accountability on the one hand and professional competence and maturity on the other.

“All Open Universities and Universities with large numbers of Affiliated Colleges will gain immensely through the ODTEL System”, he said. It may be opened to making it

Learner Centric and offer Virtual University Programme through multiple universities or institutions with collaborative offerings.

15. Stephan K. Thieringer, CEO/President, AcrossWorld Education, USA

Education is the single largest socio-economic driver of personal development in any country and the way to allow people, through their own motivation, to better the quality of their lives. There is need to continue to enable people and nations to take control of their futures. There are innovative ways to go about this through technology innovation, process innovation, product and service innovation and creativity and exploration around education. Speaking of AcrossWorld Education's engagement opportunities vis-a-vis access to affordable education, teachers and students and improving the quality of teaching and student performance, he focused on the degrees of openness in the education space.

The fundamental attribute of openness is the willingness to make materials available beyond the confines of the classroom by lecturers, students and university management. Even if the technological infrastructure exists to allow materials to be a button-click away, unless lecturers are willing to share their materials or pedagogy, the technological affordance will remain unrealized. The participation in the MIT OCW initiative was planned as a voluntary, 'faculty centric' initiative and involved faculty as early as possible on the program advisory board.

With the emergence of Web 2.0 tools such as wikis, blogs and virtual communities, the differentiation between lecturers as producers of content and students as consumers of content has started to get blurred and has shifted attention from access to information only towards access to other people based on skill and competency.

16. Dr Murali Nagasundaram, Manipal (2nd presentation)

Let me begin with a quote by Mark Twain: "I would not let my education interfere with my learning". I have long realized that learning is what mattered, not education. Sometimes education does not need the learning needs. I am interested in where learning happens; where rubber hits the road; where interaction between students and learning is happening.

Let me tell you three stories.

I was talking to a taxi driver named Pasha yesterday. His wife is a teacher and he has three daughters. Though he is from a conservative Muslim family, he wants to give his daughters excellent education. That is possibly because of the influence of his teacher wife. Mothers and wives have a very big role to play in family education. The sad thing is that is eldest daughter is enrolled in a college run by one of the educational thugs.

They fleeced him for money the first year and again in the second year without even giving him a receipt.

The second story is about my son who is in the autistic segment. He grew up in the USA and did not fit into the regular system. So I put him in a private school where classes were small and kids could proceed at their own pace. He was way behind languages, nowhere in art but way ahead in physics and mathematics. His new environment accommodated his needs. When he came to India three years ago, studied in a very different kind of school and was constrained by the system. He refused to sit for his 10th standard examinations and I spent months pleading with him to write the exam. He is back in the US now. He does not want to go to school; he wants to go to college and is not interested in any subject except physics and mathematics.

The third story just blew my mind. A colleague showed me a video of a 25 year old who grew up in a small town called Sirsi. He went to college, got a very good job, went back to his classmates and saw that his classmates had not gone anywhere in life. He wondered why he was ahead while the others did not amount to much. He realized that it was his passion for learning more than made the difference. He had struggled to acquire knowledge from wherever he could and made something of himself.

He then went back to his village, rounded up seven illiterate boys around the age of 17-18, cowherds or goatherds, who could barely speak Kannada or count. He worked with them intensely for eight months, after which these boys could speak fluently in English, they were articulate.

This tells me that in the next 30-40 years we could bring literacy to the masses. The problem is that we are thinking of using the same methodology as before. I believe that if this dramatic change could happen in just eight months, there must be something wrong with our methodology, procedures and the pedagogies. In my son's case he was able to talk to his professors in the universities. He could download electronically erudite lectures and he educated himself. Now with the use of new technologies, methodology and pedagogies, we can bring about a transformation. We take the focus away from education as we understand it and focus on learning.

In ancient times formal education could be accessed by the motivated or the elite. You worked closely with a *guru*, who knew you, understood you and personalized instructions. The *guru* was the expeller of darkness and both the source of knowledge and methodology of instruction. Then came the industrial age, which required lots of people, lots of machines, organized in rows and columns. Therefore they needed to organize people into rows and columns in factories and offices, all trained in some standardized way. So they had to be educated in rows and columns in a standardized way. Earlier, education was tailored to the needs of the individual. Now people are reduced to standardized elements and standardized instructions are imparted to them.

There may have been some merit in that but something was seriously wrong. Students started leaving school and saying that I do not need this education. I have many students who hated the classes, no matter how interesting I tried to make it for them. Today, a class might look like spaceship Enterprise but the model is the same; rows and columns of people with the addition of one dramatic change, the computer. In a class room, you might have one student actually paying attention and another taking notes but the third one would be looking at his Facebook and the fourth completing his thesis. People are physically there but not really there. I have seen it in my class. Once the laptop came, I lost my students and I do not blame them for it.

In the previous era, the teacher was the provider of knowledge and the enforcer of discipline. We need to liberate them. Today's situation is pathological; a room full of people who are not talking to each other. They are communicating with this little bright rectangle. Human beings were not meant to talk to this little rectangle. It is an anachronism. The structure was originally meant to put together people for a certain period of time to learn together. Once you bring the laptop, time and space are destroyed. So take away this structure and reconstruct education. Do not limit learning to this room because the students are just not there. They are gone. Only about 20 to 30 per cent is there. Why can we not leverage the remaining 70 per cent of them?

So are we saying "hey teacher, leave the kids alone?" Not necessarily. We still need this person as a facilitator of learning. I got into IT after I finished my masters only because of Professor Amitabha Bagchi. He was passionate, excited, and brilliant. I and scores of others just had to do what he was doing. I got interested in organizational behavior only because of the equally brilliant Professor Narendra Chattopadhyay. You need someone to inspire. That role will never go away. In a lot of situations where we introduced technology, we forget the role of the mentor or the *guru*. I have worked with technology long enough to know that it can never be the panacea. Some people call it technology enabled learning. Technology cannot enable learning. Learning is an autonomous process. Technology can augment learning. We need to respect the person and see how technology can augment learning process. We have resources available. So what do we need now? We have the computer but we do not need the modular classes. I want the structure to be eliminated.

The structure is an anachronism, an artifact of the method of instruction that was available 150 years ago. Let us re-think the way it can happen. I do not use the phrase 'delivering education' because education is not an object: just to open the head and deliver it into the head. That does not happen. We are not delivering knowledge either. Place a chimpanzee in front of all the books and you still have a chimpanzee. Knowledge is generated when the mind interacts with all those information in content and is interpreted. You can have a huge storehouse of information that does not amount to knowledge. Supposing all these structures vanish; there is a paradigm shift taking

place. In the world-wide web, content is free ubiquitous, but knowledge is not. Information is not knowledge, Knowledge requires facilitations and interpretation. That role is not going away. You can bring content to the student but unless the student is excited, learning is not going to happen.

As far as technology augmented learning is concerned, I have used the black board and VSat and did not find either very satisfactory. My chief goal with Manipal Universal Learning is to develop new pedagogies and anthologies that incorporate technologies and see how it can create new environments in which students can be motivated to learn and where learning can happen. We are setting up a learning innovation lab and I would like to engage with anyone interested in advancing technology augmented learning.

17. Koushik Nath, Regional Manger, East India & SAARC Countries, CISCO

Presenting Cisco solutions for next generation learning for higher education, Nath said that the underlying philosophy was inspiring new connections for connected Learning. Education is undergoing extraordinary changes and Cisco helps customers transform education and establish the foundation for next generation learning. Essentially Cisco's next generation learning solutions serve as the enabling platform for students, who are changing as the global economy is becoming 'one'. The education being delivered has been adapted to provide students with the skills required to compete effectively in the 21st century.

Cisco, a change agent in education, helps schools, colleges, and universities build the right infrastructure and implement technologies that help create 21st century learning environments to meet the needs of the next generation of learners. The objectives to offering students the opportunity to develop these skills by emphasizing communication and collaboration, providing access to educational resources regardless of location or time zone and empowering students to "own" their learning experience by improving communications; expanding learning opportunities; facilitating collaborative learning; empowering and engaging students; providing access to educational resources

This can be done under an overarching vision for next-generation learning that would feature the implementation of a well-planned, robust network architectures and infrastructures to create a foundation for connected learning; employ unified communications and unified wireless as well as mobility applications to provide access/support collaborative learning; offering dynamic learning environments that empower and engage students; integrating new learning modalities with traditional classroom approaches and systems; measuring results and adjust to maximize effectiveness. The idea is to understand what one wishes to do and avoid the trap of implementing technologies that do not support one's vision.

Build a foundation. Communications, collaboration, and digital content technologies are attributes of Next Generation Learning and require the existence of a fast, reliable network. 21st century schools will rely upon connectivity and access, just as modern business do.

Use Unified Communications to streamline processes and connect people. Extend the reach of your network with wireless solutions that allow students, faculty and staff to work together regardless of where they are on campus.

Commenting on the learning challenges facing colleges and universities he said that they range from shrinking budgets, rising expectations from both parents and students, the need to show tangible results and the clash between new technologies and techniques and established approaches to learning. The new route lay in

- Empowering and engaging students
- Expanding revenue opportunities
- Balancing traditional and next generation learning modes
- Helping faculty leverage new learning technologies
- Overcoming budget constraints
- Equipping students for success in the 21st century economy

Remember: 60 million people will be urbanized worldwide in 2011

Cisco's education solution portfolio includes

- Unified Communications
- Mobility and Wireless
- Video/Digital Media System
- WebEx Collaboration
- TelePresence
- Consulting Services and Training
- Cisco solutions portfolios focus on three primary areas:
- Administrative Efficiency
- Safety and Security
- Next Generation Learning

Illustrating how Cisco's Next Generation Learning can be applied to existing college environments, he said.

We can use Digital Media Systems to deliver on-demand course content directly to student's desktops or broadcast it to digital monitors and signage in classrooms or lecture halls.

- We can expand access to content and resources from anywhere on the campus using wireless solutions.

- We can enhance collaboration and communications between faculty, staff, and students with IP phones and unified communications solutions.
- We can deliver live, interactive learning experiences to students who cannot attend classes on campus due a variety of reasons, allow teachers to reach a wider audience and leverage scarce resources using virtual classroom solutions.
- We can help ensure that you get the maximum return on your investment with consulting that helps teachers understand and apply these solutions effectively.

Essentially, Cisco provided a rich, flexible learning environment and when all of the technologies are applied effectively, the concept of teaching and learning gets expanded beyond the boundaries of the traditional classroom. Students can be reached with real-time learning experiences, regardless of their location, with wireless, on-demand video and virtual classrooms. Students (and faculty) can be empowered to work together with collaborative learning spaces and unified communications and the traditional classroom experience can be enhanced with interactive tools and expanded access to resources via the web. At the center of all this is the foundation provided by a robust, secure, reliable intelligent network.

Rich, flexible learning environment

Virtual classrooms, traditional classrooms, IP communications, on demand video, collaborative learning space and mobile learning woven into an intelligent network make for a rich, flexible learning environment. Virtual classrooms offer the ability to deliver live instruction to students anywhere with live, interactive classes via the web. Students can be reached in underserved areas; one can engage adult learners in live classroom sessions from the convenience of their home or office and extend the reach of a class beyond the walls of one's campus. With a rich set of tools that help replicate and extend the traditional classroom experience, WebEx Training Center helps faculty provide effective learning experiences to students anywhere, allowing institutions to overcome the obstacles of limited funding or facilities or the time and effort of travel to deliver classes in remote locations.

Rich interactive tools (Q&A, polling, quick-response tools) for live online classes; Automated registration, tracking, and reporting; and integrated testing, breakout sessions, and hands-on labs bring rich benefits: They expand the reach of the instructor-led courses to remote/other underserved learners; keep online learners involved and engaged and promote collaborative learning. He quoted the Fox School of Business, Temple University: "Most business schools provide a passive distance learning program, much like the one we used to offer. WebEx made it possible for us to create a very attractive online offering that fully replicates the face-to-face learning experience for our students."

Focusing on the need to integrate with solutions from other leading trusted partners and providers, he said that many colleges and universities have implemented or are planning to implement platform solutions such as Blackboard or Moodle for learning management and interactive whiteboard solutions from vendors such as Promethean and Smart. Cisco's Next Generation Learning solutions must work together with solutions from these and other providers and are partnering with them to integrate our solutions. Integration between Blackboard and Cisco WebEx Training Center is available now and Cisco is nearing completion on a similar integration with Moodle, as well as integrations with interactive whiteboard solutions from Promethean and Smart. Essentially they possess open, extensible solutions architecture; packaged integrations with solutions from leading providers of solutions for education; robust partner programs and have extensive network of third-party solution providers. In terms of benefits, they integrate virtual classroom delivery with leading learning platforms such as Blackboard and Moodle and leverage integrations with interactive whiteboard solutions from Promethean and Smart to engage students and promote collaborative learning

No technology can make a difference without a clear understanding of its capabilities, limitations and application. Faculty, staff, and administrators cannot be expected to master and apply Next Generation Learning solutions effectively on their own and in their spare time. Cisco is committed to helping customers maximize the effectiveness of their investment in these solutions by providing assistance in assessing needs, devising plans to meet those needs and delivering the information and help needed to implement solutions. Cisco will provide consulting, education, service and support directly and through its network of partners and service providers to help ensure success.

This it does through onsite or online consulting with skilled experienced learning consultants; live or on-demand training in new learning technologies and techniques; proven best practices in implementing next generation learning solutions; assistance in developing content and curriculum. The benefits come in the shape of maximizing value of investment in next generation learning solutions; accelerating adoption of new learning technologies and techniques; expanding opportunities for development and growth.

He provided the Bapatla Engineering College (Guntur District, India; founded in 1981) case study of extending the Classroom with Digital Media System. "The Cisco Digital Media System provides anywhere, anytime learning experiences not traditionally available to all students and thus delivers its benefits beyond the classroom environment", according to Seshagiri Rao, President, Bapatla Engineering College

The challenge was to find an effective way to extend the classroom and provide students with on-demand learning materials. Cisco implemented Cisco Desktop Video to:

- Create anywhere, anytime learning experiences;
- Include remote broadcasts and on-demand materials
- Stream live sessions conducted by visiting professors and subject matter experts to the classrooms.

Benefits included the virtualization of the classroom and the extension of the classroom environment to include remote broadcasts. This gave Baptala Engineering College the competitive edge.