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Are We in the Process of Making Thousands of Abdul Kalam?
Or We Will End in Making None…

Introduction:

Quoting the words of Leonardo da Vinci, "Study without desire spoils the memory, and it retains nothing that it takes in." Higher Education is for grown up children who have some future ambitions and desires and want to become professionals, thus they have a great deal of expectation from the institutions of higher learning. But for those who cannot pay the high sums of private institutions have to leave aside their ambitions most of the time and join the government funded institutes like universities where the particular course which s/he wanted to join might be or not there. Thus half of the desires of students are already gone. Even in the private institutions there are students who are taking study loans and pursuing the courses of engineering, medical, architecture, designing etc. Carrying the burden of loans in that small age and then not getting the jobs in return is creating an immense mental pressure. And here comes the solution that if in that loan thing, if it is possible to go abroad and study, at least they can bag some big jobs, pay their loans and can get rid of all their tensions and can have a secure future. But the government has failed to understand this vicious circle and have allowed these private institutions to raise their fee incessantly which goes in lakhs. Now in India where poor and middle class forms around 90% of population, Is it possible for them to pay the high fee structures of IIT, IIMS, NIFT, NIFD? And where do the less scholarly children go? And when they come to government institutions another wall of reservation and politicization is waiting for them. So now if they clear it they get admission and if not they go in the courses which have seats in thousands, so finally here they are, studying the course which they never thought off and were never interested in. This may happen either at

graduation level or post graduation level. So they are studying without desire, which spoils the memory and retains nothing that they take in.

These universities which are the hope of such poor and middle class or rejected students are facing a lot of challenges. In 2007, Reflecting on the findings of a confidential report by the National Assessment and Accreditation Council, which is affiliated to the University Grants Commission (UGC), the Prime Minister Manmohan Singh expressed his concern over the fact that two thirds (68%) of the country's universities and 90 percent of its colleges are "of middling or poor quality" and that well over half of the faculty in India's colleges do not have the appropriate degree qualifications. (Singh)

The twelfth five year plan continues to emphasize the 'Three Es'—expansion, equity and excellence, which eleventh five year plan also talked off. The Plan proposes a paradigm change in the way we achieve such goals—through three new principles.

1. An overriding emphasis will be given to quality—as further expansion without quality improvement would be counterproductive for the future of India, given the serious quality issues noted in the sector.

2. The Plan also strives to diversify higher education opportunities, not only to meet the needs of employers, but also to offer a wide range of paths to success for our youth. India must develop world-class research universities as well as have sophisticated teaching institutions to impart key vocational and generic skills in a timely manner to cope with the rapidly changing labour market needs.

3. This excellence in diversity will be implemented through governance reforms, to enable institutions to have the autonomy to develop distinctive strengths, while being held accountable for ensuring quality.

Hence, the Twelfth Plan adopts a holistic approach to the issues of expansion, equity and excellence so that expansion is not just about accommodating ever larger number of students, but is also about providing diverse choices of subjects, levels and institutions while ensuring a minimum standard of academic quality and providing the opportunity to pursue higher education to all sections of society, particularly the disadvantaged. The government has opened many central universities to take care of expansion but maintaining quality still remains a challenge. There are many challenges out of which researcher would be discussing few:

1. Funding
2. Infrastructure
3. Curriculum and its Transaction

4.   Input- Students

5.   Conducting Co Curricular Activities

6.   Declaration of Results

7.   Resolving Students Unrest

1.   FUNDING: Provisioning of education, whether its expansion or excellence, requires significant amount of financial resources. The pattern of Central and State Government expenditure in a particular sector reflects the priority for the sector in the overall policy paradigm in the country. In 1966, the Kothari Commission had recommended that public spending on education in India should be raised to the level of 6 percent of Gross National Product (GNP) by 1986. Subsequently, many references have been made to the need for stepping up total public spending on education in India to the level of 6 percent of GDP. However, the situation in this regard still remains a cause for serious concern.

Chart 1.1 Mean Years of Education Received by People Aged 25 and Above
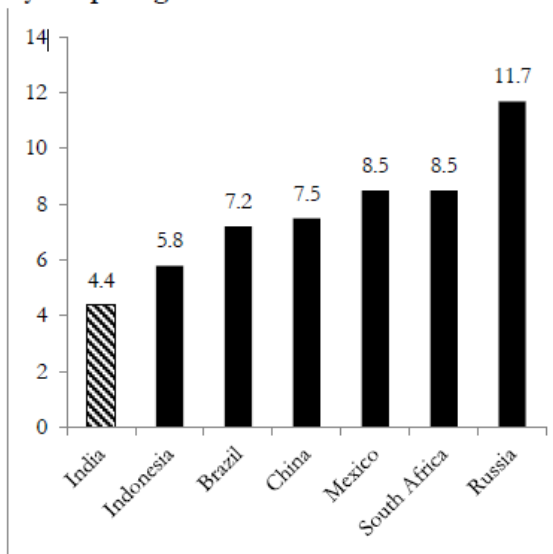
**Chart 1.2 Public Spending on Education as Share of GDP (in Percent)**
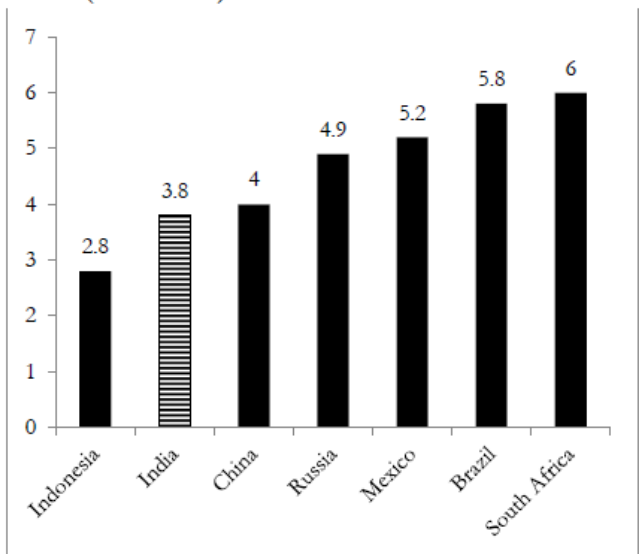
Fig. 1 Source: UNDP open data portal (https://data.undp.org)

Expansion of education in India has been remarkably slow as compared to BRIICSAM countries (Brazil, Russia, India, Indonesia, China, South Africa and Mexico) in terms of Government spending on education. As per UNDP's data (2012), India records a meager 4.4 mean years of education received by people aged 25 and above, which is much less than rest of the BRIICSAM countries as can be seen in fig 1. The public spending on education is one of the lowest among BRIICSAM countries. Brazil, one of the examples of achieving

universal education spends six percent of GDP in education, whereas India spends less than four percent on it.

India's Combined Public Expenditure (Centre plus States) on Education, as a proportion of GDP, was around 3.0 percent in the year 2004-05. It has increased over the last decade, but at a very modest pace (fig 2). In 2009-10, the level of combined public spending on education (of not just Education Departments at the Centre and in the States but also the other departments that spend on education) works out to 3.72 percent of the GDP. Even this proportion falls much short of the 6 percent of GDP for education, recommended in 1966 by the Kothari Commission. The sectoral break up shows major share of allocation goes for elementary education; though overtime a marginal improvement in allocation is observed in elementary and secondary level of education, however, 2008-09 onwards, allocation for University and higher education has gone down and continuously decreasing in the following years (MHRD 2013).
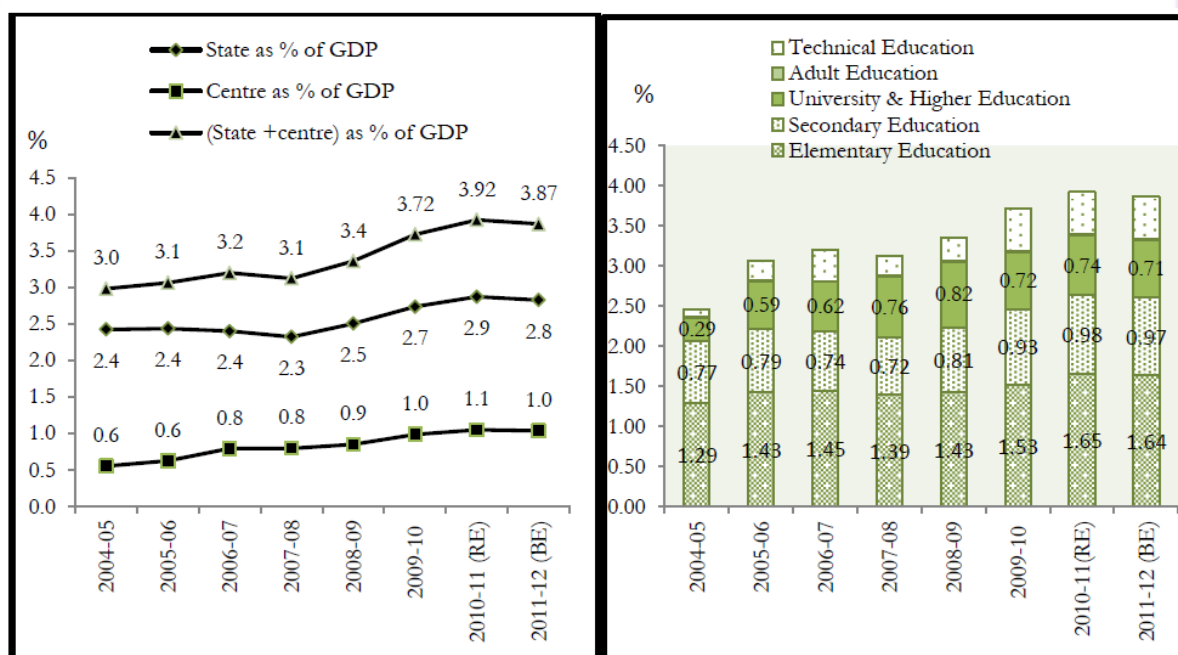
Note: GDP figures are at current market price; Source: Analysis of Budgeted Expenditure on Education 2009-10 to 2011-12, Planning and Monitoring Unit, Department of Higher Education, MHRD (2013); GDP figures are from National Account Statistics, 2014, CSO

Fig. 2

According to the "Union Budget ,Expenditure Budget, Volume II, MHRD, various years and Economic Survey, various years, Govt. of India", Over the last ten years, from 2004-05 to 2014-15, Union Government's spending on education as a proportion of total Union Budget has increased by 2 percentage points only. However, a marginal decrease from 4.7% to 4.6% in share is observed in 2014-15 allocations as compared to 2012-13 and 2013-14. The

combined expenditure on education by Union and State Government shows that States accounts for a much larger share in the country's total budgetary spending on education as compared to Union Government. Though education is the responsibility of both Union and the State (as in concurrent list), but Union government having a larger scope for augmenting revenues, should take a larger responsibility towards provisioning of financial resources for education.

1. 2. INFRASTRUCTURE: The Infrastructure of the universities in India is quite deplorable in terms of buildings, libraries, laboratories, fittings, equipments, technicians etc. The Government of India in its Budget for the year 2014-15 the allocation for higher education it has increased by 13 per cent. It is a welcome move but still a lot needs to be done. We need to speed up to fill the gaps which have been created due to sluggish growth. In 2011-12 the total Public Expenditure on Education (state + centre) as Percent of GDP was 3.87 and after breaking it into elementary, secondary, university and higher education, adult education and technical education, what was left with university and higher education was just .71%. (fig.2) (MHRD 2013). The immediate task is to make proper investment for removing the backlogs relating to maintenance of physical infrastructure. Classrooms need to be equipped with modern conveniences, audio-visual equipments and quality seating arrangements for students. In many universities it has been seen that the ceilings are dripping with water during the monsoons, the age old constructions have lead to develop cracks in the walls n ceilings of classrooms and buildings. But such maintenance gets delayed due to limited funds and wait for some mishap to occur. The bathroom facilities for faculties and students are limited in terms of the number of students coming to study for the courses and in a poor state. The cleanliness and hygiene is not maintained and water connections are missing at many places. All this gives a bad picture to the foreign students coming to India in foreign exchange programmes. So on one side we are talking of world class excellence and on other side one cannot maintain basic facilities for students. So not only creating, but maintenance also needs attention in such universities. The electrical (fans, lights, computers, internet etc) and water fittings need time to time attention and needs expenditure. In view of the rising cost of books, journals, laboratory equipments and chemicals there is an urgent need to make adequate provision for capacity building in the libraries and laboratories in the universities. The labs are having contracts with local companies but if the student has to buy a chemical from international companies they have to wait for more than 6 months because of delays with custom clearance. So

university should make sure that the research work of a student does not suffer with such problems and should enter into contracts with International chemical companies. The students even face problem with their scholarship money not being delivered in time because of delay in sending documents to funding agency from university accounts section. There should be a separate research funding facility for solving such problems. Universities should also have a provision that if a paper is accepted in international peer review journals with good impact factor then it should provide funding support to students. Similar provision may be made for the colleges affiliated to Central and State universities, particularly for those colleges, which offer post-graduate courses. The UGC's Inflibnet System also needs to be expanded to cover all State universities. Sports facilities in universities/ colleges also need to be strengthened.

2. But is this mission and vision possible with .71% of funding which is left for university and higher education after dividing it among others? Will we be able to achieve world class excellence with this meager amount? I leave it on you to think on this?

3. CURRICULUM AND ITS TRANSACTION: Universities should provide a holistic education and give students opportunities for intellectual exploration, hands-on research, job skilling, ICT (Information and communications Technology), experiential learning, creative thinking, leadership, ethics education, community service and more. And in serving this the teacher does not have to forget that each student is an individual entity and has to be treated with respect as they are grownups now and need the freedom or space of working. Has this kind of thinking and attitude really penetrated within university teachers?

4. Here again Leonardo da Vinci's quote need to be remembered that the syllabus should be revised every now and then so that it doesn't rotten up and the students desire to study remains intact. According to a study only 25% of engineering graduates are directly employable (Infosys, an IT giant, last year sorted through 1.3 million applicants only to find that around two percent were qualified for jobs.) Quality of education delivered in most institutions is very poor. University Grants Commission and Ministry of HRD should play a major role in developing a purposeful interface between the Universities, Industries and National Research Laboratories (NRLs) as a step towards Public Private Partnership (PPP) (12th five year plan, 2014-2017). The courses need to be designed according to the market demand. These courses should emphasize on the development of skills required in the market. We want need based job oriented courses in the universities.

The universities should collaborate with industries sending the students for training and learning the market skills. The science students should be sent to different research institutes for internship. And the training of students should be such that they get absorbed by the industries as soon as they finish their courses. Thus the designing of courses in such a way that it meets the demand and development of PPP is very important and will help the universities in attaining excellence and improve the output quality and will also reduce unemployment.

Not only the designing but the revision of courses should be done from time to time. But in Indian universities the revision of courses, is not a problem. The problem lies in its transaction. For transaction of a curriculum one requires expert teachers capable enough to transact the revised syllabus with minimum facilities available, as is seen in Indian universities. For expert teachers we need in-service training, refresher course, training in ICT, teachers being sent to foreign institutes to observe, learn and participate in their teaching programmes. But we don't see all this happening. The teachers in the higher learning institutes of India are not given any kind of in-service training or refresher courses. When it is compulsory for the teachers teaching in the schools to attend in service training and refresher courses then why is it not compulsory for the teachers in higher learning institutes or universities? The professors who have years of experience also should be given training in the latest content and technology, then only can we think of attaining excellence, not only in transaction of syllabus but overall excellence.

There are now global efforts to build massive online courseware by many of the world's best universities. In order to keep in league Indian universities have to adopt ICT and train not only its students in ICT but the faculties too and also train them in instructional design content creation and in adopting technology mediated pedagogy, by which the researcher doesn't mean the use of projectors only but computer aided instructions, virtual classrooms etc. This will lead to the effective transaction of syllabus and It is this Training and Capacity-Building Initiatives that can help the universities from lagging behind. Then only can we go to the next level of building our own online courseware's.

Internationalization of curriculum should be done. Internationalization of the curriculum can refer to such varied internationalization activities as study abroad programs, foreign language courses, interdisciplinary or area programs, or the provision of programs or courses with an international, intercultural, or comparative focus (Bremer & van der Wende, 1995). A programme to fund doctoral students to study at international institutions

needs to be implemented in every university to give them exposure. The Indian researchers have brain but they don't have the facility and fund to put it into use and so when these same brains get the exposure of NASA, they excel without a doubt. This is very important for Indian students to compete with other universities in world and constantly drive for excellence.

5. INPUT (STUDENTS): The students entering in these higher learning courses are good, they come for learning, and it is teacher's task to make their learning experiences interesting. "If our Universities are to be the makers of future leaders of thought and action in the country, as they should be, our degrees must connote a high standard of scholarly achievement in our graduates" (Sen, 2008). These scholarly achievements in the students have to be brought by the dedicated and committed teachers. The teachers should be such that they match to the student's level i.e. the latest technology updates, the freshness in content, treating them as an individual, creativity, innovations and listening them instead of talking. If the teacher does not change the old content which s/he has been teaching, the students are very smart and they already have those age old notes been transferred from one batch to another and with those notes they know they can clear the exams so they don't pay attention to the class and as thus the class becomes boring for them. These new generation students use what's app and twitter, on their mobiles, the moment the teacher makes an error and it is on what's app and is circulated everywhere. They can even cross check their teachers and check whether the answers are correct or not by opening internet on their cell phones. The students can easily bunk the classes as they know they can have the notes through social media. If the teacher gives them a topic directly for their assignments they will google it and bring. Thus "Children must be taught how to think, not what to think." Margaret Mead Shannon L. Alder once said, "The most intriguing people you will encounter in this life are the people who had insights about you, that you didn't know about yourself."

The teachers should try and become those insightful people for these students, only then they will be intrigued. A teacher should know about the student more than the student himself or herself. Thus the teachers need to be their friends and treat them like adults, have discussions and debates, give them the freedom to work and use every innovative way to reach them and guide them. Thus the teachers will have to work upon themselves and bring them at par with students, in technology, in awareness, knowledge, interesting pedagogical techniques etc. As has rightly been said, "The task of the modern

educator is not to cut down jungles, but to irrigate deserts." C.S. Lewis.

6. CONDUCTING CO CURRICULAR ACTIVITIES: Universities have shrink to, just a place of acquiring degrees. Instead, it should be a place which makes degree acquisition fun and lively experience. The annual university festivals should be conducted in every university. We all know about the IIT fest which is conducted every year and students from all over India participate in it. Why can't we conduct such fest in every university? Such annual fest brings students from all over India closer, gives them a chance to prove themselves not only in studies but different co-curricular activities like quiz, poetry, singing, bands, dancing, elocution, debates, antakshari, skits and various sports events. Even if we don't talk of all over India, it at least brings the students of that particular University together, gives them a sense of belonging and provide them a platform to show their talents. This enriches their studying experiences and makes sure that we don't produce the products that just have degrees but have the skills too that market demands off. Even throughout their studies, teacher should make sure that some or the other co curricular activities should keep on going, as 3+ 2 is a long time that student spends here. Various Sports team should be formed and students should be encouraged to become a part of these teams according to their favourite sports. It can be football, handball, cricket, badminton, table tennis, swimming etc. Selection of one sport should me made compulsory in the first year of graduation itself, so that the student excels in that particular sport within the 5 years of completion of a degree. Such co curricular activities will bring a positive attitude among children, help them to identify their talents and will boost confidence in them, thus shaping their overall personality.

7. DECLARATION OF RESULTS: In many of the universities the results are not declared on time especially when the number of students are high. If the student has to take admission to next course or to some other university or college s/he gets stucked because of failure in producing his/her mark sheet. Even within university if a student fails in one paper of a semester and s/he fills reassessment of the same, the results are declared when the second semester exams are to be conducted. So the student misses the internal exams of second semester. Such things are happening in the institutions and the future of students is being played with. The examination system of these higher learning institutes should be made robust enough, only then the quality can be maintained. Administration should make sure to conduct and declare the results on time. In order to bring transparency, public disclosure is essential, so these institutes should make sure that the

students are given their answer sheets and the marks been displayed online. The dates of results being displayed online should be declared prior. To make this more effective carbon copy of OMR sheets of objective test should be given so that they can check the answers by themselves when the results come online. This is being done in national level tests then why can't it be adopted in university exams? This will make the examination and declaration of results more transparent and will lead to excellence.

8. RESOLVING STUDENT'S UNREST: Declaration of results on time and making examination system transparent will reduce student's unrest because it is one of the most volatile reasons for causing dharnas, and politicization of such matters leads to ugly picture and can take the student on different path. University should make sure that first of all they declare the date of result and it should be prior to the admission dates in different colleges and universities in all over India. Then the result should come on the declared date, without any delays. Consideration of this thing will reduce student's unrest. Similarly those students who await their reassessment results should not be hanged for long, that they miss their other semester. Universities should try and reduce annual wastage too, which is also a big cause of unrest among students. Yashpal committee report says that university should be autonomous in allowing balanced growth of various branches of knowledge. Over regulation and interference in the functioning of university creates distortion. However national knowledge commission says that too much protection in past, has caused inbreeding inefficiency. The system needs to be exposed to competition so that a drive is created to improve quality (Bhushan, 2009). So a balance between freedom and competition needs to be created within universities which will prevent student's unrest. The students coming to universities are from varying backgrounds: there are students who have missed their adolescence and have been forced to earn and study, together, and then there are students who had a prolonged period of adolescence and dependence, have lots of energy but is not being utilized. So the university should make sure to take these students together and give them such an exposure of curricular and co curricular activities and life experience that it does not let any unrest happen.

Conclusion:

Dr. S. RadhaKrishnan said years ago, "If India is to confront the confusion of our time; she must turn for guidance not to those who are lost in the mere existences of the passing hour, but to her men of letters and men of science, to her poets and artists, to her discoverers and inventors. These intellectual pioneers of civilization are to be found and

trained in the universities, which are sanctuaries of the inner life of nation." (Goel & Goel, 2005)

Such is the importance of universities and these questions need to be answered at the earliest and if these questions are answered then, it can surely achieve excellence and produce thousands of Abdul Kalam.

These questions are:

1. Is it fair that due to high fees structure in professional higher institutes the students have to burden themselves with loan? In the private institutions there are students who are taking study loans and pursuing the courses of engineering, medical, architecture, designing etc. Carrying the burden of loans in that small age and then not getting the jobs in return is creating an immense mental pressure. And if it is possible to go abroad and study, and bag some big jobs, that can pay their loans and get rid of all tensions and have a secure future, then why not?

2. Are the Universities able to develop the desire and interest in the children who have already lost faith and didn't get selected in top national exams for medical or engineering? And is the system able to help them in choosing their profession?

3. Now in India where poor and middle class forms around 90% of population, Is it possible for them to pay the high fee structures of IIT, IIMS, NIFT, NIFD? And where do the less scholarly children go? In 2011-12 the total Public Expenditure on Education (state + centre) as Percent of GDP was 3.87 and after breaking it into elementary, secondary, university and higher education, adult education and technical education, what was left with university and higher education was just .71%. Is it possible to achieve world class excellence in this meager amount?

4. In terms of input (student) it is teacher's responsibility to shape them and for that the teachers should be updated and hi-tech i.e. in par with their students in modern technology. The teachers should be such that they match to the student's level i.e. the latest technology updates, the freshness in content, treating them as an individual, creativity, innovations and listening them instead of talking. They should not forget that each student is an individual entity and has to be treated with respect as they are grownups now and need the freedom or space of working. Has this kind of thinking and attitude really penetrated within university teachers? Thus the teachers need to be their friends and treat them like adults, have discussions and debates, give them the freedom to work and use every innovative way to reach them and guide them. According to a study only 25% of engineering graduates are directly employable (Infosys, an IT giant,

last year sorted through 1.3 million applicants only to find that around two percent were qualified for jobs.) if that is the picture, its time to worry then.

5. University Grants Commission and Ministry of HRD should play a major role in developing a purposeful interface between the Universities, Industries and National Research Laboratories (NRLs) as a step towards Public Private Partnership (PPP). The universities should collaborate with industries sending the students for training and learning the market skills. The science students should be sent to different research institutes for internship. And the training of students should be such that they get absorbed by the industries as soon as they finish their courses. But can it be seen happening?

6. For transaction of a curriculum one requires expert teachers capable enough to transact the revised syllabus with minimum facilities available, as is seen in Indian universities. For expert teachers we need in-service training, refresher course, training in ICT, teachers being sent to foreign institutes to observe, learn and participate in their teaching programmes. But we don't see all this happening. When it is compulsory for the teachers teaching in the schools to attend in service training and refresher courses then why is it not compulsory for the teachers in higher learning institutes or universities? The professors who have years of experience also should be given training in the latest content and technology, faculties too and also train them in instructional design content creation and in adopting technology mediated pedagogy, This will lead to the effective transaction of syllabus and It is this Training and Capacity-Building Initiatives that can help the universities from lagging behind. Then only can we go to the next level of building our own online coursewares.

7. There should be a separate research funding facility in universities which just takes care of the matters related to research or for solving the researchers problems. Many times they don't receive their scholarships on time. They don't have proper instruments or their research suffers due to long await of chemicals n lots n lots of permissions. Why cant the research students be given all kinds of facilities they require to conduct their research and their minds left free only for the research and no other tensions? Only then can we think of a robust future of India.

8. Universities should also have a provision that if a paper is accepted in international peer review journals with good impact factor then it should provide funding support to students.

9. A programme to fund doctoral students to study at international institutions needs to be implemented in every university to give them exposure. The Indian researchers have brain but they don't have the facility and fund to put it into use and so when these same brains get the exposure of NASA, they excel without a doubt.

10. Co-curricular activities like annual fest brings students from all over India closer, gives them a chance to show their talents. Activities like quiz, poetry, singing, bands, dancing, elocution, debates, antakshari, skits and various sports events shape their overall personality and development. Various Sports team should be formed and students should be encouraged to become a part of these teams according to their favourite sports. It can be football, handball, cricket, badminton, table tennis, swimming etc. Selection of one sport should me made compulsory in the first year of graduation itself, so that the student excels in that particular sport within the 5 years of completion of a degree. Then why our universities have become a place of politicization instead of becoming a place of overall development?

11. Administration should make sure to conduct and declare the results on time. In order to bring transparency, public disclosure is essential, so these institutes should make sure that the students are given their answer sheets and the marks been displayed online. The dates of results being displayed online should be declared prior. To make this more effective carbon copy of OMR sheets of objective test should be given so that they can check the answers by themselves when the results come online. This is being done in national level tests then why can't it be adopted in university exams? This will make the examination and declaration of results more transparent and will lead to excellence.

Thus with these questions answered the inner life of our nation i.e. Universities can be brought back to life.

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