

150 years of University Education in India : Challenges Ahead

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Introduction

The emergence of a world wide economic order has immense consequences for higher education more so under the changes that have taken place in the recent past with regard to globalization, industrialization, information technology advancement and its impact on education aided to these are the policy changes that have taken place at the UGC, AICTE, DEC, NCTE, Medical Council, ...BOR Council, Architecture Council and such other regulatory bodies from time to time to accommodate these development and yet maintain quality students in higher education. The landscape in general, has changed towards a new order. It is obvious Centre and state governments and that the institutions and academic and non academic staff need to gear themselves to deal with the challenges posed by those to achieve the slated, and this demands review of beaten track, set notions, comfort, attitudes and work styles. It is time for all those who are concerned with policymaking, planning, administration and implementation of Higher Educations to revitalize the very thinking on the subject and put it on the right track.

As is known that the Indian higher education system is not only large but also the most complex one. Keeping these in view, present paper is focused on the following : (i) Higher Education system in India and its growth – both in terms of institutions and enrolment. State-wise distributions ; and discipline-wise achievements, (ii) Impact of such a growth on the society and the needed corrections, (iii) issues related to affordability of students and the needed attention in terms of financial inputs. (iv) The role of regulatory body in this changed present condition, the needed policy changes to face the present day challenges such as the global demand for qualified man power and the role of higher education in training this work force for fulfilling the national and international needs. (v) The role of academic research in fostering innovation in Indian economy has been evaluated, its weaknesses have been outlined and the way forward is suggested in the paper.

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Along with these an attempt have been made to analyse and discuss other important and contemporary issues related to governance, academics, profession, use of ICT in teaching-learning and policy research. Hence an attempt has been made to looks at higher education in India in a holistic manner.

The Silent History Speaks Loud

Education in India has always been valued more than mere considering it as a means towards earning a good living. Right from pre-historic days, Education, specially higher education has been given a predominant position in the Indian society. Ancient India considered knowledge as the third eye that gives insight into all affairs. Education was available in *Gurukulas, Agrahars, Viharas and Madarasas*, throughout the country. The great universities flourished in India when most of the western world was groping in the dark. Those were the halcyon days when India led the world in scientific knowledge and philosophical speculations. Great scholar Max Muller has narrated in his own words : *“If I were asked under what sky the human mind has most fully developed some of its choicest gifts, has most deeply pondered on the greatest problems of life, and has found solutions to some of them which well deserve the attention of even those who have studied Plato and Kant, I should point to India”*. Though the glimpses of the original Indian education is still felt yet what it is today is the mix and match version of different rules.

The impact of colonial rule on India has or made the education system less innovative, non creative and least original. Had the colonial rulers built their education on this great tradition by introducing modern science and technology into the curriculum, perhaps, Indian education system would have topped on the world map.

Higher Education System in India: History Speaks as Under

Though the Indian Higher Education Structure can be traced back to Nalanda and Takshashila Institutions, still “The foundation for modern education was laid by the Britishers. They set up network of schools to impart western education in English medium (Perkin, 2006). First such college to impart western education was founded in 1818 at Serampore near Calcutta. Over the next forty years, many such colleges were established in different parts of the country at Agra, Bombay, Madras, Nagpur, Patna, Calcutta, and Nagapattinam. Its historical landmarks are McCauley’s Policy of 1835 to promote European learning through English, Sir Charls Woods’ Dispatch of

1854 which for the first time recognized the need for mass education with private and missionary help and gave up the policy of selective education known as the 'filtration theory' and finally the first Indian Education Commission of 1882 which recommended the initiative of private agencies in the expansion of education"¹.

The objective of the system of education conceived by the British government for India was to produce a class of intermediaries between the ruler and the ruled. Thus "the main aim in starting of the schools for children's as well as the institution of higher learning in the 18th century was to propagate Christianity, to have competent scholars in the Muslim and Hindu Law, and to train the British civilians in Indian languages, Indian law, and Indian history"². Out of ignorance about the great tradition of learning and education in India, Macaulay planted a system of education, which had its roots not in India but elsewhere. It was to this that Mahatma Gandhi referred to when talking about the education in an independent India, at Chatham House, London on October 20, 1931, he said:

I say without fear of my figures being challenged successfully, that today India is more illiterate than it was fifty or a hundred years ago, and so is Burma, because the British administrators, when they came to India instead of taking hold of things as they were, began to root them out. They scratched the soil and began to look at the root, and left the root like that, and the beautiful tree perished.

An important step in the history of Indian education is marked by Sir Charles Wood's epoch-making Dispatch of 1854, which led to (1) the creation of a separate department for the administration of education in each province, (2) the founding of the universities of Calcutta, Bombay, and Madras in 1857, and (3) the introduction of a system of grants-in-aid. Even when the administration of India passed from the East India Company into the hands of the British crown in 1858, Britain's secretary of state for India confirmed the educational policy of Wood's Dispatch.

The newly established universities did not initially undertake any teaching responsibilities but were merely examining bodies. Their expenses were confined to administration and could be met from the fees paid by the candidates for their degrees and certificates. The then existing 27 colleges were affiliated to these three universities. Later on more universities were established. At the time of

independence in 1947, there were 19 universities and several hundred affiliated colleges (CABE, 2005).

Although the establishment of the universities resulted in rapid expansion of college education and the products of the new learning displayed keen scholarship, the value of learning started decaying. In such circumstances it was ironic for the Indian Education Commission of 1882 to declare, "*The university degree has become an accepted object of ambition, a passport to distinction in public services and in the learned professions.*" Another undesirable practice was the domination of the universities over secondary education through their entrance examinations. University policies regarding curricula, examination systems, language of instruction, and other vital issues were chalked out by university teachers who had little experience in school education and hence kept the administrative convenience college requirements. Thus, secondary schools education was geared towards preparation to a college education than for quality life. Thus the system became top heavy.

The commission of 1882 made it very clear that the "elementary education of the masses, its provision, extension and improvement requires strenuous efforts of the state in a still larger measure than heretofore." It also desired to check the wild race for academic distinction and "to divert some part of the rapidly swelling stream of students into channels of a more practical character." Despite this warning, however, alternative courses in commerce, agriculture, and technical subjects that were offered in a limited number of selected schools did not prove popular. The educated classes could not be diverted from their conventional path.

The second half of the 19th century is, nonetheless, of great significance to the country because modern India may indeed be said to be a creation of this period. It brought about a renaissance by breaking down geographic barriers and bringing different regions and long-separated Indian communities into close contact with one another. The blind admiration for Western culture was gradually passing away, and a new vision and reorientation in thought were coming about. A feeling of dissatisfaction also developed toward the existing governmental and missionary institutions. It was felt by some of the Indian patriots that the character of Indian youths could be built by Indians themselves. This led to the establishment of a few notable institutions aiming at imparting sound education to Indian youth on national

lines-institutions such as the Anglo-Mohammedan Oriental College in Aligarh (1875), the D.A.V. College in Lahore (1886), and the Central Hindu College in Varanasi (1898). The politically minded classes of the country had also come to regard education as a national need. They were critical of the government's educational policy and resented any innovation that might restrain the pace of educational advance or diminish liberty.

Higher Education in India: As it grows

After independence, which coincided with the post-Second World War era, India made concerted efforts to improve access to higher education and the system grew rapidly after independence. By 1980, there were 132 universities and 4738 colleges in the country enrolling around five percent of the eligible age group in higher education. No doubt Indian higher education is one of the second largest, other one is China and the United States. Yet is one of the most complex ones.

Uptill 1980, the growth of higher education was largely confined to liberal arts, science and commerce. Not only the government supported higher education by setting up universities and colleges, but also took over the responsibility of running the institutions set up through private sector, which were known as grant-in-aid (GIA) institutions or private aided institutions. *In such institutions, though the private sector financed major part of the capital costs, public subsidies were provided to them to meet a part of the recurrent costs, and occasionally for some capital works. Public funding was accompanied with considerable regulation of private institutions by the government* (World Bank, 2003).

Over a period of time, private aided institutions became a mirror image of the government run institutions. This had serious repercussions on the future of higher education in India. *During this period, this de facto nationalization of private higher education not only killed community-led private initiatives, but gave a serious blow to the standards of the private colleges, many of which had over the years set high academic standards for themselves.*³ On the other, the growing demand for higher education resulted in rapid growth in enrolment as its relevance in business and industry was felt by people and also due to the affordability of the middle income group. Increased demand for higher education laid considerable stress on governmental resources which resulted in private participation in higher education. The state had no choice than to accept private participation for two reasons : (i)

Quality-wise they had maintained standards and (ii) State Resources were limited. The reforms in early 90s saw the middle class population larger, younger, richer and the country supported entrepreneurship. Thus, education was seen not only as a status symbol but also as a means to get ahead of others. Privatization of higher education has been natural outcome of several policy changes such as liberalization, privatization, privatization, etc. during 1991. All these set a pace for accelerated growth of higher education by the private sector in the country.

Till late 1990s, there was of affiliated colleges in the universities. Yet, there was realization amongst the promoters of private institutions about the powers of the regulatory mechanism of the universities and the state governments with regard to checks and balances on key items such as admissions and fee regulations. Thus, the autonomy of private institutions was not questioned. Thus the efforts towards moving out of the strangle held of affiliating universities lead to the establishment of deemed-to-be universities and a way to get the degree granting powers. Between 2000 and 2005, 26 private-sponsored institutions got the deemed university status. Since education is on the concurrent list and the State governments can themselves establish private universities through legislation in the state legislature. By early 2005, seven private universities were set up in different states and were also recognized by the UGC.

Attracted by the advantages of the above, a newly constituted state - Chhattisgarh in central India set up of 97 universities with all India jurisdictions in the year 2002. These had neither established proper structure or functions or structure-function relations. This was struck down by the Supreme Court in February 2005 leaving the fate of nearly fifty thousand students registered in these universities astray ; the future of those who acquired degrees from these '*so called*' universities remains uncertain. The Chhattisgarh case is an example towards a caution to the regulatory system as the gaps that exists in these regulatory bodies and its impact on the system.

There has been an appreciable growth in the number of universities and colleges in India since independence from 25 and 700 in 1947 to 354 and 17625 in 2005. The total enrolment increased from a meager 0.1 million in 1947 to 10.48 million in 2005 resulting in twelve fold increase in number of university level institutions and twenty-eight fold increase in number of students. Yet it

can cater to only 7% of the age group population viz 18 to 25 years which is lower than even that of developing countries as Indonesia (11%), Brazil (12%), and Thailand (19%). This small proportion of the targeted population enrolled in formal education at the tertiary level is indicative of the huge gap between *access and demand* for higher education in India. The demand is so high that no country in the world, no matter how rich it is, can afford to meet by the state funds alone, especially such type which are tuition free or highly subsidized by the state. The total enrolment increased from a meager of 0.1 million in 1947 to 10.48 million in 2005. The bulk of the higher education system lies in its 131 affiliating universities. It contributes around 89 per cent of the total enrolment.

Table : 1 Growth of Higher Education Institutions and Enrolment in India

Year	Universities*	Colleges	Total	Enrollment (Lakhs)
1947-48	20	496	516	2
1950-51	28	578	606	2
1960-61	45	1,819	1864	6
1970-71	93	3,277	3370	20
1980-81	123	4,738	4861	28
1990-91	184	5,748	5932	44
2000-01	266	11,146	11412	88
2005-06	348	17,625	17973	105

Source: University Grants Commission

*Includes central, state, private and deemed-to-be universities as also institutions of national importance established both by the central and the state legislatures.

State wise Distribution of Higher Education Institutions vs GER in %

States/UTs	Universities	Deemed	National Importance	Research Institutions	Arts Science & Com. College	Engg. Tec & Arch College	Gross Enrolment ratio in HR. Edu. %
Andhra	18	5	0	5	1330	238	9.51
Arunachal	1	0	0	3	10	1	6.37
Assam	5	1	1	0	317	3	8.67
Bihar	11	1	0	11	743	7	7.3
Chattisgarh	9	0	0	0	213	2	7.77
Goa	1	0	0	0	24	4	13.47
Gujarat	10	2	0	16	422	32	9.65
Haryana	4	3	0	0	163	41	10.56
HP	4	1	0	2	69	2	12.76
J & K	5	0	0	0	73	4	4.95
Jharkhand	4	2	0	1	146	5	7.27
Karnataka	13	6	0	1	930	120	8.12
Kerala	7	1	1	1	186	66	9.92
MP	14	3	0	0	513	56	7.66
MAH	19	13	1	21	1208	177	12.3
Manipur	2	0	0	0	58	1	13.19
Meghalaya	1	0	0	0	48	0	10.94

Mizoram	1	0	0	0	26	0	9.51
Nagaland	1	0	0	0	36	0	4.33
Orissa	8	1	0	0	567	19	8.71
Punjab	5	2	1	0	209	16	8.53
Rajasthan	9	6	0	0	456	39	8.77
Sikkim	1	0	0	1	2	1	6.29
TN	16	9	2	1	441	96	10.91
Tripura	1	0	0	0	14	1	5.84
UP	22	7	1	10	733	69	7.03
Uttranchal	4	2	1	0	47	2	12.25
WB	14	1	2	11	354	43	8.21
A & N Island	0	0	0	0	2	0	0
Chandigarh	1	0	1	0	12	2	28.68
D&N haveli	0	0	0	0	0	0	NA
Daman&Diu	0	0	0	0	1	0	NA
Delhi	5	8	2	1	63	16	10.94
Lakshadweep	0	0	0	0	0	0	NA
Pondicherry	1	0	0	0	11	5	17.88

Typology and Growth Trends of Higher Education Institutions

Type	Ownership	Financing	No. of Institutions*	Enrolment*	Growth Trends
Government Universities	Public	Public	240	1000000	Not Growing
Private Univ	Private	Private	7	10000	Emerging on the scene
Deemed Univ – Govt. Univ	Private or Public	Public	37	40000	Growing Slowly
Deemed to be Univ-Pvt Unaided	Private	Private	56	60000	Growing Rapidly
Govt. College	Public	Public	1500	1000000	Not growing
Pvt. Aided College	Private	Public	5000	5000000	Not growing
Pvt. Unaided College	Private	Private	4000	3000000	Growing Rapidly
Foreign Univ	Private	Private	150	8000	Emerging on the scene

Source: Pawan Agarwal, Higher Education in India, The Need for a Change , ICRIER, WORKING PAPER NO. 179 , MAY 2006

Today Higher Education system is geared for the mass catering to meet the demands of a vibrant democracy committed to the principles of equity. India today's takes the pride for its best of the Institutions and products. Yet it is not happy with its institutions that are not of that quality and hence the products are of the same quality.

The World Bank report of 1994 highlights the worth of higher education wherein it is considerable that institutes of higher learning benefit state and society in several ways: they equip individuals with advanced knowledge and skills to discharge responsibility in government, business and professions; produce new knowledge through research and at least serve as conduit for the transfer,

adaptation and dissemination of knowledge generated elsewhere in the world. The taskforce constituted by World Bank and UNESCO during 2000 has also observed that higher education helps increase wages and productivity that directly enrich individuals and society. As against these world opinion in its paper on government subsidies (1997) that higher education as 'non – merit' good based on the reasoning that it benefited individuals more than the society. The Birla Ambani reports on the policy framework for Educational Reform too suggested that the government subsidies on higher education should be minimal it should concentrate on Primary Education sector as per Constitutional guarantees and perhaps focus Secondary Education area too. They felt private universities by legislation is perhaps the answer to the malady.

According to the census 2001, the overall literacy rate in the country has gone up by 10 percent during the last 10 years. The vision of SSA (Sarva Shiksha Abhiyan is to provide useful and relevant elementary education of satisfactory quality for all by 2010 (universal retention by 2010) and it is possible that more (8-10 percent) of this freshly educated lots would seek admission at college level in the next 8 to 10 years. As against the current capacity of eleven million college seats created in the last 150 years, we require to create an additional capacity of eight to 11.7 million college seats in the coming eight to 10 years. Obviously this is a gigantic task that cannot be addressed by the government alone.

Over the time there has been emergence of new types of providers of higher education in India. Not only private institutions proliferated, distance education programmes gained wider acceptance, public universities and colleges started self-financing programmes, foreign institutions started offering programmes either by themselves or in partnership with Indian institutions and non-university sector also grew rapidly.

The growth of higher education in India has been largely guided by the serviceable prerequisite of the economy. After independence, the role of the state in planning out a development path and also in building higher education institutions was guided by mutuality of purpose. Most observers of higher education in India feel that performance of higher education institutions has been less than satisfactory in terms of access, equity and quality. The reason of course is said to be ambivalent attitude of the state".⁴ (See Kapur D and Mehta PB, 04)

Now there is an urgent need to work for the development of the educational sector to meet the need of the emerging opportunities, increasing younger generation population and challenges of the 21st century. Knowledge is the base for overall growth and if the nation has to be competitive and to be at par with the globalisation pace, we will have to respond to the market forces. Encouraging investment in education both public and private by itself will also contribute towards employment, as education is labour intensive.

Supply should cater to all those who aspire for higher education of their choice and be employable. Accordingly output at secondary level should also be calibrated and the quality standards through Accreditation should meet the confidence of the market forces. The demand and supply should be synonymous to future growth. Thus, a long-term integrated policy on education, which encompasses standards from the school to the tertiary level, which can deliver the required proficiency, is to be put into place on emergent basis. To reach and achieve the future requirements there is an urgent need to relook at the *Financial Resources, Access and Equity, Quality Standards, Relevance and at the end the Responsiveness*.

The Way Forward

From its very shape of the education and education system present today in India, it is evident that there is a very serious effort required in terms of creating new channels of education, developing a standard delivery system of education, generating funds to support the universalisation of primary education and other levels, increasing the vocational training at all levels to create able manpower in the society, streamlining the technical and higher education towards quality offering, modeling standards at all levels for public private partnership, building research oriented institutions and bridging the academic and economy gap.

Some of the issues which are recognized to be of great concern and require immediate attention with reference to the changing social structure, economic growth, opening up to borderless economy and increased attention towards the public policy system and private partnership, need to be addressed.

There is a realization that driven mainly by the private sector, the higher education system in India has grown fast over the last two decades; however *this expansion has been chaotic and unplanned. From an elite system of higher education, it is*

moving towards mass system of higher education. Expansion of enrolment without adequate public financing and emergence of the private de facto for-profit providers of higher education has changed the relationship between the higher education institutions and the government and its regulatory arms. The drive to make higher education socially inclusive has led to a sudden and dramatic increase in numbers without a proportionate increase in material and intellectual resources. As a result, academic standards have become unsettled and have been placed in jeopardy in the university-system in the country since the 1960s (André Béteille, 2005)

There are many basic problems facing higher education in India today. These include inadequate infrastructure and facilities, large vacancies in faculty positions and poor faculty thereof, outmoded teaching methods, declining research standards, unmotivated students, overcrowded classrooms and widespread geographic, income, gender, and ethnic imbalances. Apart from concerns relating to deteriorating standards, there is reported exploitation of students by many private providers. Ensuring equitable access to quality higher education for students coming from poor families is a major challenge. Students from poor background are put to further disadvantage since they are not academically prepared to crack highly competitive entrance examinations that have bias towards urban elite and rich students having access to private tuitions and coaching. Education in basic sciences and subjects that are not market friendly has suffered.

Research in higher education institutions is at its lowest ebb. There is an inadequate and diminishing financial support for higher education from the government and from society. Many colleges established in rural areas are non-viable, are under-enrolled and have extremely poor infrastructure and facilities with just a few teachers. A series of judicial interventions over the last two decades and knee-jerk reaction of the government – both at the centre and state level and the regulatory bodies without proper understanding of the emerging market structure of higher education in India has further added confusion to the higher education landscape in the country. There is an absence of a well-informed reform agenda for higher education in the country. A few efforts made now and then are not rooted in the new global realities based on competition and increased mobility of students and workforce.

Role of Regulatory Bodies vis-a-vis Quality

Higher education in India is coordinated by several agencies. While most of general higher education falls within the jurisdiction of the UGC, professional institutions are coordinated by different bodies. The AICTE is responsible for coordinating technical and management education institution. The other statutory bodies are Medical Council of India (MCI), Central Council of Indian Medicine, The Homeopathy Central Council, The Indian Council of Medical Research (ICMR), Indian Nursing Council, The Dental Council, The Pharmacy Council, The Bar Council of India, and The Indian Council of Agriculture Research (ICAR) etc. There are also a few such bodies at state level, such as State Council of Higher education that were established currently. There are yet another type of a coordinating agency, called AIU, which was earlier known as Inter-University Board of India. AIU has no executive powers, but plays an important role as an agency of dissemination of information and as an adviser both to the government and/or UGC and University.

Sl. No	Name of Body	Mandate	Overlap with role of
1	University Grants Commission	Co-ordination, determination and maintenance of standards in higher education. ; Release of grants to individual institutions	Other professional councils and DEC
2	All India Council for Technical Education	Proper planning & coordinated development of technical education system throughout the country	UGC, DEC, Pharmacy Council of India, Council of Architecture and the State Councils for Technical Edu
3	Distance Education Council	Promotion of Open University in and Distance Education systems in the educational pattern of the country	Other professional councils and UGC
4	Indian Council of Agricultural Research	Co-ordination of agricultural research and development programmes and develop linkages at national and international levels	UGC
5	Bar Council of India	Co-ordination, determination and maintenance of standards in legal education and profession	State Bar Council
6	National Council for Teachers Education	Achieving planned and coordinated development of the teacher education system throughout the country	DEC
7	Rehabilitation Council of India	Standardization and regulation of training of personnel and professionals in the field of rehabilitation and special education	State governments
8	Medical Council of India	Establishment of standards in medical education and to define medical qualifications in India and abroad.	State Medical Councils and the State Govt; UGC and DEC to a limited extent
9	Pharmacy Council of India	Prescription, regulation and maintenance of minimum educational standards for the training of pharmacists	AICTE and State Pharmacy Councils
10	Indian Nursing Council	Regulation and maintenance of uniform	22 State Nursing Couls.

		standards of training	with different Acts have registering powers
11	Dental Council of India	Regulation of the Dental Education and ethics in the country	Ministry of Health
12	Central Council of Homeopathy	Maintenance of the central Register org of Homoeopathy	State Councils
13	Central Council of Indian Medicine	Maintenance of the central Register of Indian Medicine	State Councils

There are significant differences in their mandate, powers and functions. The councils have rules and regulations of their own. There is large overlap of their functions with the functions of the UGC, other professional councils and even function of universities in some cases. In five cases, namely - Medical Council of India, Pharmacy Council of India, All India Council for Technical Education, Indian Nursing Council and the Bar Council of India, there are also State Councils; and there are overlaps in functions of the national councils and state councils.

Today in this scenario there is very little of clearly defined policy for promoting and regulating institutions and especially the private initiatives. "Whatever policies exist, they are of ad-hoc nature prescribed by either the central regulatory bodies and /or by the various states and UT's. Often because of inconsistencies, ambiguities, and vagueness -especially in the light of different legal mandates of these agencies and the concurrent status of higher education-there have been a plethora of legal battles resulting in enormous expenditure to the governments and the institutions" (M. Anandkrishnan, Policy Orientation for Private Initiatives in Hr education: Issues and Options, 2003)

In order to encourage full participation of private education providers the regulatory bodies have to play the role of *facilitators and not regulators*. There should not be any inconsistency in the policy for the growth of different types of higher education institutions. There is a need to establish a system whereby there is a minimum procedural consistency among the regulatory bodies in establishing new higher educational institutions. Since there are different types of institutions coming up in the same premises under the responsibilities of different agencies which create more confusion and delay. So harmonizing the processes of different agencies would require willingness on the part of the agencies themselves and amendments in their Acts and statutes. One very important thing, which has to be kept in mind that too much interference exerted by the Regulatory bodies would result in discouraging

their initiative and autonomy. There are multi-layered regulations, which have to be made more simple and supportive.

It can also be thought that all that is required to ensure quality across the board is to have a national level overseeing body that is teathed with powers to grant permission to establish a university and to derecognize an already established university if it fails to maintain the prescribed standards. It is also essential that the functioning of such a central authority is transparent and its decision are nor arbitrary. To ensure such transparent governance authority should prescribe its parameters for granting permission to establish a Institution/university. Similarly it should also make it known to the participating agencies as to on what lines the performance of a university is assessed to declare it as eligible for its continuation or not.

Taking a cue from the experiences it is time that we had one central body to oversee the functioning of higher institutions/universities-both in public and private management and evaluate them on prescribed quality parameters to ensure excellence in education. This anomaly needs to be corrected if the credibility of Indian Higher Education system is to be sustained in the coming years under severely changing competitive environment. It can only be possible if the different approaches in policies between the various regulatory bodies and agencies are harmonized.

Review of the existing structure of regulatory system in India and the way it regulates various aspects of higher education show that the existing regulatory procedures are extremely burdensome and counter-productive. They often control supply limiting choice by erecting formidable entry barriers for new institutions to be set up through private enterprise. Time consuming, non-transparent and complex procedures applied arbitrarily, create conducive environment for rent seeking and patronage. It makes higher education institutions less accountable. The system is strait-jacketed and inhibits innovation. Overall, the system works towards standardization in higher education and not for maintenance of standards. There is a widespread feeling that regulatory bodies in India have miserably failed to discharge their responsibility towards maintenance of standards. Summing up the situation, Mehta and Kapur (2004) conclude that the existing laws regulating higher education in India tend to

promote adverse selection. It deters genuine investment in education, but encourages those who are adept at manipulating the license quota raj in the system.

In a recent survey of the degree of regulatory control of the major higher education systems in the world, The Economist has noted that whereas, most nations in the world (including China) are working towards loosening of statutory control over their higher education systems, India is moving in reverse direction and tightening government control in institutions of higher education. It is also clear from the mapping of the regulatory system in India that there is a diarchy in higher education in India. While, UGC is expected to oversee it, the state governments regulate it in practice. In addition, the higher education institutions are subjected to a multi-layered regulatory and control process involving a number of agencies and bodies. Despite all this, higher education in India has virtually remained an unbridled horse (Pinto, 1984).

In view of the above, it is no surprise that many of the better known institutions of higher education in India such as – the Indian Institutes of Technology (IITS), the Indian Institutes of Management (IIMs), National Institute of Fashion Technology (NIFT), National Institute of Design (NID), Indian Institute of Science (IISc), Tata Institute of Social Sciences (TISS) and Birla Institute of Technology and Sciences (Pilani) – are all outside the conventional university system in India. IIMs, NIFT and NID do not even have degree granting powers and offer only diplomas.

Complex and dysfunctional regulatory arrangements for higher education in India have raised serious concerns about the credibility of the Indian higher education system. There is a need to safeguard its integrity and enhance its credibility. Loss of this credibility would have serious repercussions. Our competitive advantage as a nation with huge reserve of highly qualified and trained manpower may be lost. Many countries are shying away in signing mutual recognition agreements with us because of horror stories that they hear about deteriorating standards of higher education in India. This would become more difficult in the years to come, if we allow any further compromise on the standards of higher education in the country.

Being blamed for all its ills, it is often argued that total deregulation of higher education in India would serve the public interest best. This argument is based on the simple principle of economics that if the market regulates institutions more efficiently and effectively than the state, then task of regulation should be left to the

market; facilitating oversupply would be the best way to subject market sensitive institutions to the regulations of the market. The manner in which clearing of demand and supply takes place in higher education suggests that leaving higher education to market forces may not be most viable option. Though, academics would normally object to the concept of regulation especially as it relates to academic quality, however it needs to be understood that due to its very nature, academic standards need to be determined and coordinated across universities requiring some kind of external scrutiny. This makes regulation important; though equally important is as to the nature of regulation, who is responsible to develop and who would implement these regulations.

Financial constraints

One of the most important things that have to be noticed is the issue of financial constraints before the government. The State Government has already been spending 20-30 percent of its revenue budget on education. It will not be able/could not afford to spend more. It is without doubt that the government has to spend on elementary education, they have to spend on secondary education and the budget outlays of the government also reflect that. The government is also moving towards compulsory secondary education and we applaud that step. But that basically means that even for the secondary education they are only comfortable with being able to deploy half of that budget for the next five years, the other half have left to the Planning Commission to manage those resources. This actually means that there is really very little left for higher education.

In India, at least, the spending per student has been going down over the years. The share of education in our five-year plan outlay has been falling. The first five-year plan gave education 7.86 per cent. By the fifth plan, the share of education was only 3.27 per cent of the outlay. Even if you take both central and state government spending together, it does not get better. Current spending on education in India is not more than 3.5 per cent of GDP. The Center itself concedes that the minimum should be 6 per cent. Again, out of the amount spent, very less is being envisaged to be spent on higher education. Its not even 3-4% of GDP. This compares unfavourably with the international reference level, especially with countries such as South Africa, which invests 8 per cent of GNP on education. A near doubling of investments in education is the soundest policy for increasing the country's GDP per

capita by many fold. *Therefore there is a need to evolve policy through which Private/non-governmental resources is mobilized.* Now there is a question as to how to build self-sustaining models of institutions critical for autonomy and long –term viability and student-support.

“ As a result of reduced funding and rising costs, there are pressures to find more cost-effective solutions in every aspect of higher education. Knowledge economy has endowed higher education explicitly with an economic value. Higher education is no longer perceived as acquisition of a paper degree but an opportunity to obtain sufficient knowledge and skill so as to function as a productive member of society. There is now a more instrumental view of higher education. Finally, there is the changing structure and delivery of higher education including new types of educational institutions, and increasing use of technology that allows institutions to operate on national and global scale. All these changes have resulted in growing demand for increased accountability”(Schray, 2006).

Autonomy and Affordability

When we talk of autonomy then it is not just for the private institutions and the self-financed institutions but also autonomy for the institutions, which are under the government either fully or partly financed by the government. The type of autonomy which ensures that the stakeholders are protected-particularly the students-against dilution in quality or being misled. Concerning autonomy, the law must delegate the necessary decision making power to the institution – for changes in curricula and teaching methods, for internal self-governance, for interaction with other organisations nationally and internationally and for economic transactions.

It is also very important that *accountability must follow autonomy.* In all fields where the institution has been given the responsibility to make its own decisions, the decision process should be transparent and results should be made public. On the other hand quality assurance systems will be important cornerstones in our system of higher education. The quality assurance system must be independent of political and institutional interaction and it must have a basis in the legislation. *There should be operational, financial and academic autonomy coupled with accountability.*

When it comes in forms of financial autonomy as has been observed by educationists in the past, the case for subsidy in the supply of education to the individual consumer is based on the premise that education is a mixed good

involving substantial external benefits. However, it is widely agreed that such external benefits tend to taper off at higher levels of education and that there should be greater correspondence between costs involved and fees charged. Such an approach favours enhancement of tuition fees and other related fees.

Student loan schemes are an essential complement of cost-recovery and the charging of fees. Many students are unable to afford the cost of higher education out of their families' current income, and loan schemes permit them to pay out of their future earnings. About fifty countries, both industrial and developing, have such schemes, including more than half the Latin America and countries such as China, Ghana, Egypt, Jordan, Kenya, Korea, Malawi, Malaysia, Morocco, Pakistan, Philippines, and Sri Lanka.

An elaborate and well-designed scholarship and loan scheme for the needy, to make higher education, accessible to all, would prove to be an effective mechanism of financing higher education.

Full-cost recovery, however, can be ruled out; just as heavy subsidization of higher education is theoretically unsound. It may be noted in this context that even in a highly developed country like the US where private universities charge much higher tuition fees than state universities, tuition fees form less than 40 per cent of the costs; the rest comes from alumni support, endowments, etc. It can be suggested that:

1. Those who can afford to pay should not be subsidized, particularly in the light of scarce available financial resources. Even if government commits to providing need based scholarships to all students it is currently subsidizing, at worst, it may be still spending what it is spending today, but at best, it may have surplus funds to invest in higher education.
2. Those who are subsidized by public funds owe something in return, either by way or repayment or services.

Other time tested as well as innovative sources may be tapped; some examples include eased bank loans, innovative financial instruments, mobilization of industry and individuals to institute scholarships with tax and naming incentives, alumni support and endowments, cross-subsidization within institutions, but without diluting merit.

Access and Equity

The matter of access and equity of higher education is another very important issue in the management of higher education. This should be based on the simple principle that has already been stated '*No talented and deserving person should be denied access to higher education*'. This guiding code presumes a lot of things.

Higher education should be based on merit and desire and not economic, social or influential forces. State with the help of private sector, should take primary responsibility of financing higher education, as fees will not be able to play a central role in the higher education economics. The concept of earning while learning or exchange of labour or skills for education needs to be promoted. Acquiring of multiple degrees and diplomas simultaneously has to be encouraged and the standards of evaluation have to be strengthened. Disparities and discrimination of age, gender, and socio-economic background need to be tackled.

Quality assurance : Need of an Independent Accreditation System

There is a need of an independent accreditation agency with a conglomerate of government, industry, academia, society etc. means all stakeholders of the education to ensure that the stakeholders particularly the students are not taken for a ride. They should be able to know whether a particular institution delivers value or not, then things can be under control to some extent. The institution, which excels in obtaining Accreditation, should be encouraged to levy higher tuition fees from those who can afford, compared to those who do not receive Accreditation. It is also important that all institutes of higher learning must make public the acceptability of their courses and degrees. (i.e. the status, recognition and acceptability of their courses by other institutions). Any misrepresentation of facts to the general public, should make the institute and its promoters, directors and staff liable for civil prosecution

Technical education, both vocational and professional, constitutes the foundation for development of science and technology, and business. India is rightly proud of the international standing of its IITs, and IIMs, but a handful of world-class technical institutions are not sufficient. A large number of the country's engineering colleges, medical colleges, business schools, other science and technology institutions need to be created and upgraded to quality standards and given the required autonomy.

Relevance

In the changing new world order higher education should equip students only with generic skills rather than tailor them to meet the specific requirements of industry.

This is due to the realization that evaluation of economic needs is often random and approximate and could change often. It is argued that the generic skills together with flexibility and adaptability and an acceptance of the need for life-long learning, will provide young people with the best basis for a career in any area, including industry and for the unforeseen needs of the future. Though, there is merit in this argument, however there is no doubt that education needs to be made more useful and usable and to prepare young people for employment and encourage adaptability.

The above analysis calls for the intervention by the state to make the connection between higher education and the jobs more efficient as a means for reducing unemployment. This is based on an instrumental and extrinsic model of higher education - rather than on the more altruistic and intrinsic model of liberal education and is in line with the human capital approach towards higher education.

In all, there is a need for the enlargement of diversity and adaptive capacity of higher education and training system in India to respond to changing economic environment. This is not only desirable to ensure that higher education institutions continue to be relevant, but it is an essential step enabling them to enjoy greater autonomy within a framework of greater self-responsibility. Adaptability in higher education needs to be nurtured in two ways – first by creating conditions for a continuous updation of curriculum and content as per changing needs and secondly by shuffling admission capacities between different institutions and courses as per job market needs. Coexistence of high graduate unemployment and shortage of skills reflects the paradox of the Indian higher education system. To avoid mismatch, capacity of the higher education system has to be aligned to the job-markets.

Internationalization of Education

There has been a very aggressive approach by USA, UK and Australia in few decades on spreading their education outside the country and these countries have taken some of the issues in their parliamentary bills to expand and develop the vocational and higher education outside the country. In Asia, Singapore, Malaysia, Dubai are such places, which have made few locations of Education offering with quality while providing minimum infrastructure. As commented by Dean, London

Business School that 'India lacks in offering basic infrastructure and location to offer quality education from the reputed universities of the world'. There is a need of very clear view on Education Policy on the internationalization of the higher and other level of education in either form by inviting the foreign players in the Indian education and by providing the Indian education players through and official channels to the countries, which have opportunities for Indian educational institutions.

Vocationalization of Education

There is a gap between the need of the employment terminals i.e. industry and the academic institutions. With the reducing government employment opportunities and increasing economy-oriented employment, close links need to be fostered between vocational institutions and user industry and also technical and professional institutions and industry. It is important to recognize the level of involvement of the industry and thus create interest of the industry in developing the quality, financial support, acceptance of the produce, creation of more employment etc. The higher education systems have very controlled way of qualifying the recognition of offering the degree or the diploma. These systems do not allow majority of the institutions to offer quality developmental programmes, which are needs of the economic manpower. There should be an independent accreditation body to assess the purpose, quality and offering of the programmes for undergraduate programmes, from one-year masters to three year of masters or even higher education.

Public-Private partnership and Institution-Industry Interface

There has been some effort both by the government and the private education institutions to develop the teaching staff at various levels. However, this needs to be intensified with appropriate attention to all the aspects related in order to prepare quality and sufficient number of educational staff. Such efforts need a very serious structuring for the research base institutions.

It is a very popular and known fact that funding of the institutions either private or the government, is not going to be supported by the state or central governments for long. A public – Private Partnership Model should be developed and encouraged by the government to create a self-sustainable model of education in times to come.

Looking at the whole scenario, there is a need for interaction between universities, academic institutions of higher learning, industry, R&D institutions and funding agencies. This could be achieved by a synergy process wherein they will be partners

in various activities, complementing each other in reaching their visions, objectives and goals. Generally, this is perceived as an activity for interaction but there is need to re-look in order to develop such a process wherein there will be more than interaction. This could be achieved by PARTNERSHIP. A few interventions needed are (i) Develop a database of facilities available in the university, Industry and R&D institutions. (ii) Involvement of Industry in the curriculum development and also implementation of the curriculum (iii) Faculty exchange and participation in industry and vice-versa in university and specialized institutions (iv) Participation of executive who have Ph.D., involve them in research and development both in industry as well as universities (v) Industry to utilize the human resource and infrastructure available in the universities for problem solving, testing, certification etc. (vi) Conducting advanced programme in technical, management and other need-based areas, tackling contemporary issues of mutually beneficial nature (vii) setting up a business development cell on partnership and (viii) Promoting entrepreneurship in education system

We have to be optimistic that private-public partnership and the Industry interface will take place in the field of education at all levels, and particularly in the backward regions, which is the need of the hour. To achieve excellence, we thus need to create a real partnership between government, educators and industry – Partnerships that can provide our high- tech industries with skilled workers who meet the standards of their industry.

It is important to mobilize resources, arrest the process of declining resources, liberalise the conditions and procedures for grant of autonomy to institutions of higher learning, adopt new ways and means to raise funds to make the system more efficient, responsive and accountable and encourage participation of private enterprise for creating a network of institutions.

Higher Education and Status of Academic Research

If we see the number of researchers engaged in Research and Development activities as compared to other countries we find that we have merely 119 researchers, whereas Japan has 5287 and US has 4484 researchers per million of population. Even in absolute terms, number of researchers in India is much smaller compared to US, China, Japan, Russia, and Germany. Numbers of doctoral degrees awarded in all subjects are 16, 602 out of which 6774 are in Arts and 5408 in science

and rest in others (professional subjects). India has a little over 6000 doctorates in Science and engineering, compared to 9000 in China and 25000 in US. It increased rapidly from a little over 1000 in 1990 to over 9000 in recent years in China. In comparison, there has been a modest increase in India. National Science Foundation (NSF) - Science and Engineering Indicators – 2002 shows that in the US, about 4% of the science and engineering graduates finish their doctorates. This figure is about 7% for Europe. In India this is not even 0.4%. Data on doctorates particularly in science, engineering and medicine suggests that only a few institutions have real research focus. In engineering there were merely 650 doctorates awarded in 2001-02. Of these 80 percent were from just 20-top universities. In science, 65 percent of the doctorates awarded were from the top-30 universities.

The above data paints a grim picture of the status of research in India. The performance of university sector was quite significant in 1950s and 1960s. It has fallen significantly in recent years. In developed countries there is a very strong relationship between UG/PG teaching and research and students have a good exposure to eminent research scientists, which is lacking in the Indian system. The academic institutions in India are often severely under-resourced. These have insufficient linkages amongst themselves and with the society at large.

Quality is a major issue in social science research as well. The approach of doctoral research in social sciences need to be more analytical and comparative and be related to society, policy and economy. A study conducted on Social Science Research Capacity in South Asia – 2002 showed that the share of the Indian universities in the special articles published in the Economic and Political Weekly was only about a 25 percent. This too was dominated by only three universities, namely - Jawaharlal Nehru University, University of Mumbai & University of Delhi.

The sorry state of the art status of Indian research is also due to lack of adequate linkages between universities and research labs on one hand and universities and businesses on the other. Because of lack of finance the required infrastructure and experimental facilities for research are scarce and what ever less exists is not being optimally utilized due to lack of collaborative work and absence of culture of sharing of facilities. Status of doctoral education is disturbing. Their numbers are not increasing to meet the growing demand from the public sector research labs and

higher education institutions. There are a small number of university level institutions that produce a decent number of doctorates. Even amongst them, there is a suspicion about the quality of doctoral education from at least some that are not known to be reputed, yet contribute to a significant numbers of doctorates.

The number of Ph.Ds from Indian Universities should increase with proper standards. This should be seen in the context of extremely low fraction of Ph.Ds in India in relation to M.Sc./B.Tech., as compared to what it is in USA, UK, Germany, Japan etc. The emphasis for research will clearly emerge if we have Universities with only Departments and separately Universities having affiliated colleges. Research fellowships for Ph.D. students need to be enhanced In order to attract more students to join Ph.D. programs at various universities and colleges, the numbers and quantum of JRF and SRF needs major revision, especially in view of the fact that other professions provide much more lucrative salaries and perks.

Meritorious doctoral students should be recognized through teaching assistantships with stipends over and above the research fellowships Identifying talented, meritorious students and encouraging them through recognition is very important to attract students into research and teaching. It will be very useful to provide teaching assistantships to the deserving students joining Ph.D. programs in the Universities. These students should assist faculty members in laboratory work and/or in tutorials for a certain specified number of hours. This will improve laboratory practicals and keep meritorious students in touch with teaching during their Ph.D. research programs. It would also be encouraged that young school students should be given stipends to spend time in active laboratories and institutions of DAE, DST, DBT, CSIR, ICAR, ICMR, Space, Defense, Public and Private sector R&D companies and selected Universities.

Post-doctoral research culture must be promoted for improvements in R&D Unlike the advanced countries, where a large pool of post-doctoral research fellows carries out the bulk of high-quality research, there is a near total absence of a post-doctoral culture in India. One way of encouraging the growth of such an environment in India would be to give positive recognition to good post-doctoral research work in India at the time of appointing faculty/scientists.

The government should also start new institutes for education and research in various disciplines as it has started in Kolkata and Pune, and the third planned at Chandigarh. A new institution for design and manufacturing has been set up at Jabalpur. These are efforts in the right direction, but for a country of the size of India, much more needs to be done.

New information and communication technologies have changed the entire development paradigm. The new technologies offer vast opportunities for progress in all walks of life. It offers opportunities for economic growth, improved health, better service delivery, improved learning, and social and cultural advances. India's information and communication technology expenditure is not only a decent 3.8 percent of the GDP; new technologies are highly affordable in India. This has helped in rapid increase in its usage. Though efforts are required to improve the country's innovative capacity, yet the efforts should be to build on the existing strengths in light of new understanding of the research-innovation-growth linkage.

Conclusion

After independence, there has been tremendous increase in institutions of higher learning in all disciplines. But with the quantitative growth has it been able to attend to the core issue of quality. Quality should embrace all its functions and activities: teaching and academic programs, research and scholarship, staffing, students, building, facilities, equipments, services to the community and the academic environment. Internal self-evaluation and external review, conducted openly by independent specialists, if possible with international experts, are vital for enhancing quality. Due attention should be paid to specific institutional, national and regional context in order to take into account the diversity and to avoid uniformity. Quality also requires that higher education should be characterized by its international dimensions: exchange of knowledge, interactive networking, mobility of teachers and students and international research projects, while taking into account the national cultural values and circumstances. To attain and sustain national, regional or international quality, certain components are particularly relevant, notably careful selection of staff and continuous staff development, in particular through the promotion of appropriate programs for academic development, including teaching/learning methodology and mobility between countries, between higher

education institutions and between higher education institutions and the world of work, as well as student mobility within and between countries.

The regulatory environment for higher education as it exists in India today taking into consideration the emerging market structure for higher education and peculiar nature of higher education as a service and specific areas of concern need to be identified. In absence of a detailed planning and control approach - not found useful in the experience of many countries, a regulatory framework that takes care of market failure and facilitates market coordination need to be considered.

The overall standards of academic research in the country are very poor. Several measures are required to be taken to ensure that India has a respectable position in its research performance. These measures would include increasing the level for funding academic research in India and altering the funding mechanism, improving physical and information infrastructure for quality research through a nationally coordinated approach, putting in place objective measures for assessing research performance and rewarding performance and promoting collaboration along with competition in research in India.

There is no doubt that these measures call for considerable additional financial investment. Not only is there an overall shortage of funds, there are also several competing demands on the slender states finances. But education is an investment in human resource development, and all future development essentially revolves around the quality of the human resource. While a part of the financial requirement can be met by mobilizing and judiciously utilizing local (community) resources, a large part has to come from the state funds. But the most important is that private education providers should be encouraged and they should come forward to invest in education in these areas. But for that a favorable environment has to be created. Private participation in the financing and management of education should be encouraged also in semi-urban areas to bring about efficiency in the system and make it more effective and relevant. The government needs to adopt the pro-active approach.

With the changing scenario at a much faster pace including service sector playing vibrant role, the system should aptly respond to dynamic flexible and innovative practices at a matching pace. The flexibility, responsiveness, timely action would be

detrimental to market forces trying to occupy larger share in the name of innovation and become the expertise for larger market share. Information Technology advances is a very good example for our country whereby responsiveness could result in greater market share.

There are several other challenges that we face in higher education in India today. Prima Minister in his remarks made in the Harvard Alumni meeting on March 25, 2006 noted that paradoxically, our (Indian) educational system faces the conflicting threats of anarchic growth in quantitative terms and moribund stagnation in qualitative terms. We need a balance between populism and over-regulation; between unbridled marketisation and excessive bureaucratization. We need an educational system that is modern, liberal and can adapt to the changing needs of a changing society, a changing economy and a changing world. The thrust of public policy for higher education in India has to be to address these challenges.

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