Roadmap for Reforms in Governace & Management of Indian Higher Education System

*Dr. Arun Nigavekar**

1. Importance of Higher Education in 21st Century

"Education was to be a vehicle for socio-Economic development."

- Jawaharlal Nehru

Twenty first century is a century of knowledge. Only those nations, which are capable of creating knowledge and utilizing it for generation of wealth, will survive and prosper in this century. It is well known that higher education (HE) system of a country is mainly responsible for creation of new knowledge and generation of wealth.

It is in the matter of higher education (HE) system that a significant difference exists in the developed and developing nations. Developed nations already have, in place, a well-organized higher education system that is fine-tuned to creations of new knowledge and its utilization for generation of wealth. Universities in these countries are able to attract intelligent and motivated students from developing countries, who go for obtaining higher education; then stay back and contribute to the prosperity of these developed countries. Developed countries are thus able to maintain a critical mass of highly educated young men and women who generate new ideas and create innovative science and technology tools which give rise to new industries and better products for enriching life styles of their citizens.

On the other hand, developing countries are becoming aware that education is a proven tool for change, and for the youth to participate the knowledge revolution and enjoy the economic benefits it brings. However, their higher education system is old and outdated; infrastructure is sub-standard and resources are scarce. These countries are also beset with numerous problems such as illiteracy, poverty, lack of public health system, water, energy and transportation problems etc. The available scanty resources are woefully inadequate to address the problems stated above. In such cases, higher education is often the first casualty, and the vicious circle goes on.

2. Search for a New Paradigm: A Necessity

"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

- Albert Einstein.

"A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning. This shift changes everything. It is both needed and wanted".

-Robert B.Barr and John Tagg

**Raja Ramanna Fellow, STP, Pune University and Former Chairman , UGC.*

(Robert B.Barr is the Director of Institutional Research and Planning and John Tagg is associate professor of English at Palomar College, San Marcos, California).

The case of higher education in India is not different from the general scenario in other developing countries. Indeed in India we have the world in miniature. On one hand we have a few education institutions that are comparable to the best in the world in terms of infrastructure and research facilities.ButUnfortunately these are only a few islands of excellence in an ocean of mediocrity! Many of our higher educational institutions are sub-standard in terms of both physical and human resources. This gets reflected in their activities that in turn affect the quality of output.

India has witnessed a phenomenal expansion of transportation and communication network during the past decade. This has exposed people in one state of India to the progress (and therefore the standard of living) in other state. Even in the same state rural and urban barriers are eroding. This has led to convergence in operation in all states to achieve better quality of life. However this same convergence has led youth in all states to awareness that access to higher education holds the key to economic well being. This has, in turn, caused a serious problem of access to higher education.

However, before we turn to the serious problem of access to higher education and search of a new paradigm to solve it, let us take a survey of higher education in India.

3. Survey of Higher Education in India

"Man is neither mere intellect, nor the gross animal body, nor the heart or soul alone. A proper and harmonious combination of all the three is required for the making of the whole man and constitutes the true economics of education".

- Mahatma Gandhi.

"While the fundamental values to which the universities owe their allegiance arc largely unrelated to time and circumstances, their functions change from time to time. Their tasks are no longer confined to the two traditional functions of teaching and advancement of knowledge. They are assuming new functions and the older ones are increasing in range, depth and complexity. "

- Education commission (1996)

Education in Ancient India: In ancient India there were two systems of education

(i) Hindu system of Rishis and Ashramas, and

(ii) Buddhists system of Monks and Veharas.

Teaching was oral with great emphasis on discussion and debate. The objectives of education were to study of theology, and scriptures, and search for the ultimate truth and divinity.

Education in the middle Ages: Large-scale invasions and establishment of empires by Muslims in India brought another system of education to India, viz the Madarasa system. But this system also was oriented towards Islamic theology and study of scriptures.

These indigenous systems of education were oriented towards theology, philosophy and spiritualism. There was no concept of education as a key to good life.

British System of Education: This system, devised by Macaulay, was aimed at "Creating a class who would be interpreters between us and the millions whom we govern, a class of persons, Indian in blood and colour, but British in tastes, in opinion, in morals and in intellect."

With this aim, the British established a Hindu college in Calcutta in1817, and in Bombay and Madras shortly thereafter. Medium of instruction was English; European literature, history and science were taught.

Introduction of the British system altered the purpose of education, from religion and culture to providing an access to wealth, power and well being in the British Raj. By 1855, there were 281 high schools.

Need arose to regulate these high schools, colleges, and to start university level education. In response, the first three universities ere established in Calcutta, Bombay and Madras. Since these universities were meant to control colleges scattered in different parts of the provinces, these universities were not residential and teaching institutions but were affiliating and examining bodies, with no teaching and research commitment.

Thus, when India gained independence in 1947, there were 19 universities, 496 colleges and 40,000 students.

Post Independence Scenario: After independence education system was to be a vehicle for socio-economic development. The spirit of a resurgent society, generated in the wake of the newly acquired freedom, was to train minds capable of ushering in an era of advancement of society. The inherited education system was inadequate to meet these challenges. To give the education system a proper direction was the objective of the following important commissions set up by the government. of India.

1. Radhakrishnan Commission in 1948-49.
2. Kothari Commission in 1964-66.
3. National Policy on Education in 1968.
4. Draft Policy on Higher Education in 1978.
5. National Commission on Teachers in 1983.
6. National Policy on Education in 1986.
7. Perspective
8. Paper on Education in 1990.

The UGC (University Grants Commission) was established in 1953 to decide upon norms for standards, to maintain quality, to establish common facilities and services, and to regulate the fees structure in colleges and universities, and to financial support to colleges and universities to enhance and strengthen their academic and other support infrastructure.

All such measures led to a steady rise in education until 1955. The real rise has taken place in the last decade fuelled mainly by proliferation of private, self-financing colleges. Tables 1, 2 and the graph in fig.1 (see fig. 1& Table 1, 2 on page no. 4) depict the phenomenal rise in higher education.

Distance Education & Open Universities

These represent additional dimensions of Indian Higher Education. Their objective is to provide access to higher education for those who are unable to devote full time to education. The first institutions of Correspondence Courses was started in 1962 by Delhi University. Now more than 60 universities offer Correspondence Courses. With availability of Internet, website and radio link facilities, and conference facilities, correspondence courses have transformed themselves into high-tech e-learning centers.

Open universities have been functioning since the last decade. The Andhra Open University was the first university in distance education. Later at a national level IGNOU (Indira Gandhi National Open University) was started in 1985. Since then 13 open universities have been established. They use course team approach to develop multimedia instructional materials and built-in quality assurance mechanism. They have also set up a wide network of study centers co-ordinated by Regional Centers. The annual enrolment is around three million. With the advent of IT revolution, Open University Education System is poised to play a vital role in Indian Higher Education (IHE) System.

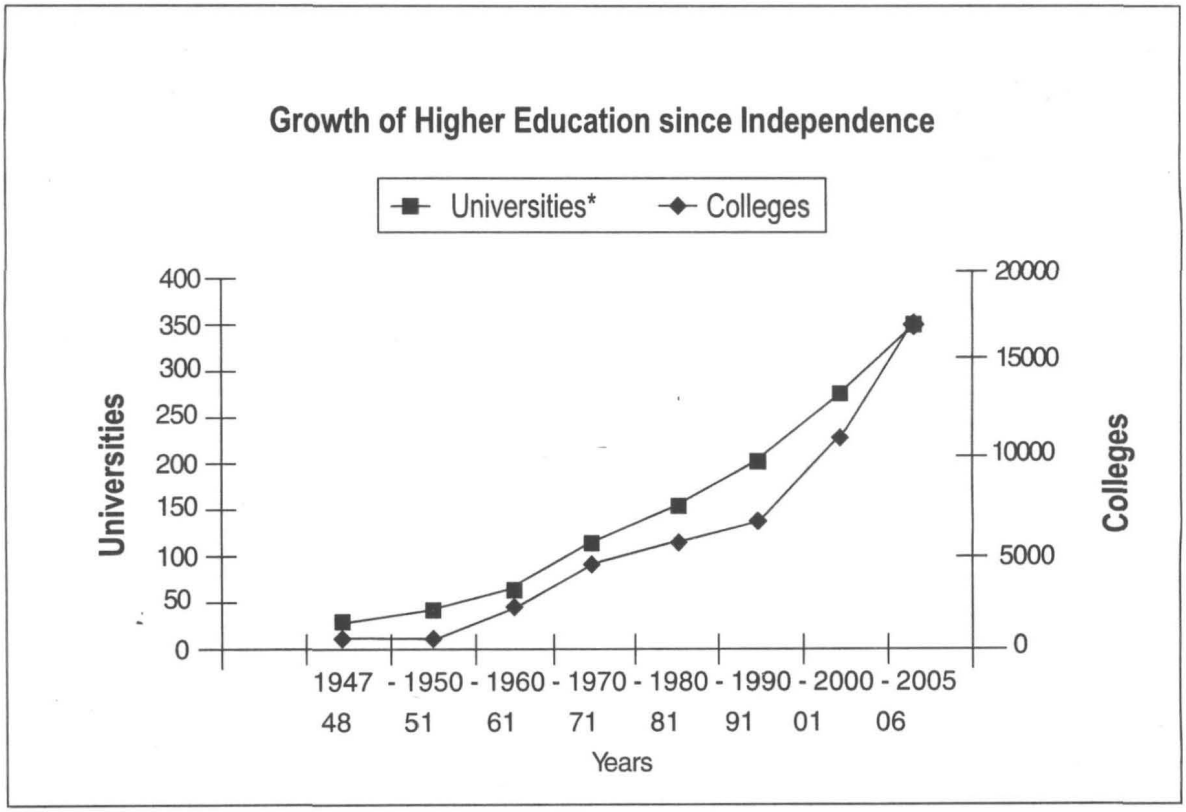


Table 1 : Higher Education Institutions and Enrollment in India: Growth Pattern

Year	Universities*	Colleges	Total	Enrollment (Millions)
1947-48	20	496	516	0.2
1950-51	28	578	606	0.28
1960-61	45	1819	1864	0.60
1970-71	93	3277	3370	2.0
1980-81	123	4738	4861	2.8
1990-91	184	5748	5932	4.4
2000-01	266	11146	11412	8.8
2005-06	348	17625	17973	10.5

**Includes Central, State Deemed-to-be, and Private Universities and Institutions of National importance at Central and State level. The data includes both conventional and open Universities*

Source : University Grant Commission.

Table 2 : Enrollement of Students at differents levels : 2004-2005

Stage*	Universities (includes University Colleges)	Affiliated Colleges	Total & % of Grand Total	% in Affiliated Colleges w.r.t Grand Total
Graduate	92,4991	83,90,817	93,15,808 (88.90)	90.07
Post-Graduate	33,7643	6,48,875	9,86,518 (9.41)	65.77
Research	62,413	6,425	68,838 (0.65)	9.33
Certificate/ Diploma	62,884	46,994	1,09,878 (1.04)	42.76
Total	13,87,931	90,93,111	104,81,042	86.75

The Indian HE system has grown enormously in the last five-and-half decades. It has achieved unimaginable and partial success in meeting the quantitative need for higher education. But it has also given rise to unavoidable constraints, which could seriously impede emergence of a new education model. These must be taken as reference points while drawing the new governance and management map. However, let us familiarize with new dimensions that have now become part of higher education at the global level.

4. Higher Education at Global Level with Special Reference to American Higher Education

"There is no hope for any speculation that does not look absurd at first glance".

- Neils Bohr, Physicist

"I find that because of modern technological evolution and our global economy, and as a result of the great increase in population, our world has greatly changed: it has become much smaller. However, our perceptions have not evolved at the same pace; we continue to cling to old national demarcations and the old feelings of 'us' and 'them'."

-Dalai Lama

Head of the Dge-lugs-pa order of Tibetan Buddhists, 1989 Nobel Peace Prize, b.1935

Higher Education system the world over is changed from "elitist" to "mass" education. Most developed countries encourage admission of foreign students to subsidize the education of local students. Foreign students admission has internationalized higher education & linked it to economy. The better the educational structure and the research infrastructure, greater is the rush of foreign students. American universities hold top rankings in the world's best universities causing phenomenal influx of foreign students to America.

American higher Education System is influenced by three major philosophies.

1. Jeffersonian ideas of limited governmental control.

2. American belief in capitalism and rationality of the market place. Hence, American colleges and universities vie for students, faculty and funding.

3. America's commitment to equal opportunity and social mobility of especially, minority groups.

The American Higher Education system has come out with four major of colleges:

1. *Community Colleges* running two years vocational courses and awarding associate degrees.

2. *Universities and Public Colleges* giving bachelor's degree after completion of four years of instructions.

3. *Private Not-for-Profit Institutions* that are basically teaching and research Universities and have four-years liberal arts and science colleges, nursing and fine arts colleges and colleges in other disciplines.

4. *Private For-Profit Institutions:* running mainly vocational courses that give skills to students so as to become employable.

Tables 3 and 4 give a survey of these four types of higher education institutions.

Data is on higher education institution (Control of institution, degree-granting Status, and level of institution) for the academic year 2003-04.

TABLE 3 : (See on Page No. 7)

Enrollment in Higher Education Institutions, by degree-granting status, level and control of institution, attendance status, gender United Status, fall 2002.

TABLE 4: (See on Page No. 8)

Changes in institutional charges for undergraduate tuition and required fees for full-time, full year undergraduates at degree-granting institutions, by year, level of institutions and residency: United States, academic years 1998-99 and 200-04.

TABLE 5: (See on Page No. 9)

Governance* and *management of American higher education system, and hence control, is as follows,

1.*Government funding* is both at state and federal levels. Federal Govt. does not directly finance colleges and universities. But it is the primary financer of research and financial aid to students' in colleges and universities.

2. ***Indirect control:*** State Govt. also exercises control indirectly, mainly through two sets of voluntary organizations.

(a) accrediting organizations such as ABET, and

(b) membership associations like alpha-kappa, etc.

Sources of finance of American colleges and universities are as follows,

1. *Tution and other fees* constitute the major source of reference of American colleges and universities.

2. Appropriations, grants, and contracts from Federal, state and local governments.

3. Private gifts, endowments and investments earnings and sales from industries and enterprises.

4. *Private donations* from individuals and corporations provide a major source of revenue for American Colleges and universities.

5. *Gifts from Alumni* is also a major source of finance revenue.

Table 3 : Data on higher education institutions (control of institution, degree-granting status, and level of institution) for the academic year 2003-04

Degree -granting status and level of institution	United States			
		Private		
	Total	Public	Not-for-Profit	For-Profit
All institutions	**6,354**	**2,051**	**1,921**	**2,382**
4 years and above	2,90	632	1,558	300
At least 2 but less than 4 years	2,170	1,155	251	764
Less than 2 years	1,694	264	112	1,318
Degree-grating	**4,168**	**1,712**	**1,665**	**795**
4 Years and above	2,466	631	1,538	297
At least 2 but less than 4 years	1,702	1,081	127	494
Less than 2 years	*	*	*	*
Non-Degree-granting	**2,186**	**339**	**256**	**1,591**
4 years and above	24	1	20	3
At least 2 but less than 4 years	468	74	124	270
Less than 2 years	1,694	264	112	1,318

*Not applicable

SOURCE : U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2002. Education Statistics Quarterly, Volume 5, Issue 4.

Table 4: Enrollment in Higher Education Institutions, by degree-granting status, level and control of institution, attendance status, gender United States, fall 2002

Level and Control of institution, attendance status, gender, and race/ethnicity	All institutions		Degree-granting		Non-degree granting	
	Total students	Percent	Total Students	Percent	Total Students	Percent
Total Students	17,035,027	100.0	16,611,711	100.0	423,316	100.0
Level of Institution						
4 - Year	10,083,252	59.2	10,082,332	60.7	920	0.2
2 - Year	6,640,516	39.0	6,529,379	39.3	111,137	26.3
Less than 2 year	311,259	1.8	0		311,259	73.5
Control of institution						
Public	12,883,071	75.6	12,751,993	76.8	131,078	31.0
Private not for-Profit	3,299,094	19.4	3,265,476	19.7	33,618	7.9
Private for Profit	852,862	5.0	594,242	3.6	258,620	61.1
Attendance status						
Full time	10,272,756	60.3	9,946,359	59.9	326,397	77.1
Part time	6,762,271	39.7	6,665,352	40.1	96,919	22.9
Gender						
Men	7,344,936	43.1	7,202,116	43.4	142,820	33.7
Women	9,690,091	56.9	9,409,595	56.6	280,496	66.3

Note : Detail may not sum to totals because of rounding.

Source : U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), spring 2003.

Table 5: Changes in institutional charges for undergaraduate tuition and required fees for full-time, full-year undergraduates at degree-grating institutions, by year, level of instituion, and residency : United States, academic years 1998-99 and 2003-04.

Control of institution and residency	Under-graduate tuition and required fees					
	1998-99		2003-04		Percent change	
	4 years and above	At least 2 but less than 4 years	4 years and above	At least 2 but less than 4 years	4 years and above	At least 2 but less than 4 years
Public Institutions[2]						
In-district						
Average Charge	$3,213	$1,437	$4,621	$1,876	43.8	30.6
Median Charge	3,007	1,357	4,259	1,822	41.6	32.5
In State						
Average Charge	3,214	1,775	4,542	2,245	41.3	26.4
Median Charge	3,007	1,490	4,185	2,112	39.2	41.7
Out of State						
Average Charge	8,327	1,490	4,186	2,112	39.2	41.7
Median Charge	8,324	4,170	10,853	4,852	30.4	16.4
Private not for profit Institutions						
Average Charge	11,610	7,298	15,149	9,091	30.5	24.6
Median Charge	11,285	6,710	15,120	9,000	34.0	34.1
Private for-profit Institutions						
Average Charge	8,787	7,686	12,037	10,971	37.0	42.7
Median Charge	8,160	7,501	10,932	9,960	34.0	32.8

The above-mentioned sources have tended to decline over the years with the result that the financial burden is being shifted to students. Tuition and other fees have risen at twice the rate of inflation. Problem of access to higher education, particularly for low-income group, has become a big problem. There is a hot debate on how much of the cost of higher education ought to be borne by the government & how much by the student & their families.

But one thing is certain. American higher education has served and continues to serve American economy well. The challenge facing American higher education is how to balance market forces, Govt. intervention & access to high quality education.

5. Limitations of Indian Higher Education & Challenges of 21st Century

"The more constraints one imposes, the more one frees one's self. And (he arbitrariness of the constraint serves only to obtain precision of execution."

- Igor Stravinsky

"To raise new questions, new problems, to regard old problems from a new angle require creative imagination and makes real advances."

- Albert Einstein.

"'Every organization has to prepare for the abandonment of every thing it does. Be prepared to abandon everything, lest we have to abandon the ship."

- Peter Drucker

1. While introducing universities in India, the British took the London University model viz, that of an affiliating university, concerned only with affiliation and examination, and not with teaching and research. Sadler Commission report (1916) did recommend teaching & residential universities. The first of such universities were Banaras Hindu University (1916) and Aligarh Muslim University (1922). However the affiliating & examining type of university has established such a stronger hold that we have to work hard to loosen its impact.

2. Second serious limitation is the absence of any coherent and consistent national policy on education (NPE). It is clear that the Govt. does not have resources to fund basic education for all, and also to source higher education. One has to go in for a combination of public institutions on the one hand and private institutions. We do not have a consistent and coherent NPE, and this is seriously affecting higher education.

3. The problem of numbers poses another serious problem. Our higher education system is crumbling down under the weight of numbers, and quality is being sacrificed in favour of quantity. If this is the state of affairs when we are catering to hardly 10% of the eligible group, one shudders to think of what would happen when the numbers would triple in the next 10-15 years.

4. Institutes of Corresponding Courses (ICCS) & Open Universities (OUs) were started to compliment the conventional system of higher education. But they have deteriorated to become factories for turning out poorly trained, substandard work force. Government's have shied away form the task of regulating them so as to assure some quality.

5. Paucity of good teachers is another serious limitations of higher education system in India, with sudden, unbridled expansion of higher education system, and with substantial increase in pay package, a horde of unfit and mediocre persons rushed in to system. The

problem was further complicated by socio political compulsions of reservations without paying attention to merit. The upsurge in employment opportunities in industry has led to predominantly mediocre, incompetent persons, who have no capability to undertake research, being the part of higher education system.

6. Total dependence on Governmental funds has been a serious problem with higher education system. With the decline government's fund in favour of basic education, higher education system has always faced and continues to face a serious resources crunch.

7. Although government is not really meeting demand for expansion of higher education, it continues to have a strong control on education system, thereby impedes the education system from effectiveness & efficiency. Here also there is no consistency & coherence in policy. Inability to determine fees, and the absence of policy for seeking private funding are examples of lack of coherence. Indirect control over employment on faculty & on creation of infrastructure by government is very annoying.

8. To sum up, the problem of increasing students, unprepared students, in different faculty, reduced resources, absence of co-ordination between different stages of education, colonial legacy are the major problems that the Indian higher education faces today. They have deprived higher education system of quality, creation of knowledge & generation of wealth.

6. The Challenge of Accountability

"It is a miracle that curiosity survives formal education"

- Albert Einstein.

Duties are not performed for duty's sake, but because their neglect would make the man uncomfortable. A man performs but one duty - the duty of contenting his spirit, the duty of making himself agreeable to himself.

- Mark Twain.

1. Indian higher education started facing problem of quality since 1980. In the first three decades after independence, Government's were concentrating on infrastructure growth, & quantity took precedence over quality. However, as Indian economy boomed after globalization in 1990's & India emerged as a major player in the world of software, BPO, KPO sectors, questions of quality & accountability came to the fore front.

World over, accountability of higher education became a topic of concern in 1970's, but the 90's saw the demand for accountability in higher education rise. In India also, accountability came to the center stage when higher education moved from private privilege of the elite to the right of the masses who began perceiving it as a means of becoming a part of the economic boom.

Accountability in USA: Accountability is the most advocated but least analyzed word in higher education. Each stake holder viz students, teachers, non teaching staff, parents, employers, Government, & society, has its own way of looking at it, & may be conflicting in nature. Joseph Burke (14) & others (15) have discussed many facets of this problem of accountability.

Accountability in USA has gone through various phases such as, (I) Trust & Self Regulation, (II) Bureaucratic rules & regulations, (III) Performance between autonomy & accountability. Ultimately the accountability triangle model, shown in Fig. - 2 has emerged (John Burke).

Accountability in India has two more facets

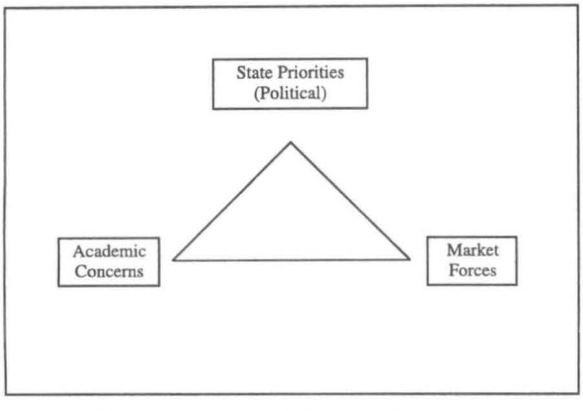
than in USA viz; international & social forces and these are briefly discussed below.

1. State control: Government wants to push its idiosyncrasies in admission and employment of teachers. But here, there is often conflict of interest in state & central governments approach.. Coalition governments in States & at Center have given regional small parties, which are incapable of rising above their narrow local level, and have no vision to look at bigger national picture, a bigger say in policy making and this has complicated & confused the issues of accountability, Emergence of political leaders as providers of higher education, who influence government's policies to suit their vested interest, has made State control devoid of consistency & national focus.

2. International Forces: Developed nations having their higher education system, which is well tuned to emerging trends, look at India as green pasture to enhance their presence on Indian soil. The "GATS" agreement treats education as a "Merit Good" & it provides for easy access in to Indian higher education market.

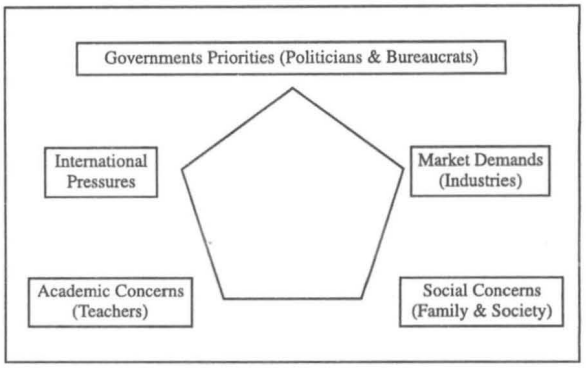
3. Academic Concerns: As pointed out above, academics' in India comprises of mediocre people in large numbers. They resist any moves for change or excellence because it means additional workload. The unionization of teachers has lead to their refusal to accept reforms. This has made excellences, quality and accountability a casualty in Indian Higher Education System.

4. Social forces: Communication & transport revolution has brought into sharp focus disparities, not only among states but also among urban & rural level in the same state. As a result, even poor people have started realizing that access to higher education holds the key to their economic well being and socialization. They are demanding access to higher education at affordable cost. They want the government to bear expenses for their higher education, because they cannot bear themselves. Thus, the main social concern is accountability based on accessibility, affordability & relevance.



The Accountability Triangle

Fig.2: Quality Triangle in use



The Accountability Pentagon

Fig. 3 : Quality Pentagon in use

5. Industry: In this era of globalization, industry's concerns for survival in the face of world competition is reflected in their demand for graduates who can take up jobs immediately, without much gestation period. They want current technologies to be incorporated into curricula.

Each of the five corners of the pentagon has a bright & dark side. Accountability in the Indian context has many faces and if it is to rise as a force for social & economic change all the

five stake holders have to came together & device an acceptable way for balancing all the conflicting forces.

7. Approach to new educational outline

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn"

- Alvin Toffter.

"The Global e-Schools and Communities Initiative (GeSCI) matches the power of I CT with educational need, and has potential not only to improve education, but also to empower people, strengthen governance, open up new markets and galvanize our efforts to achieve the Millennium Development Goals"

Kofi Annan, Secretary General, United Nations.

The basic issues causing concern in Indian Higher Education System are access, relevance, quality, cost & the future of higher education. Indian education has changed with the emergence of private colleges & universities. This is likely to cause the higher education system to be more enterprising (to meet market demands) & flexible in approach (to compete with global challenges). Even then the fact that more than 70,000 students go abroad for higher education to countries like USA, UK, Europe, Australia, etc is a matter of shame & concern for the Indian system of higher education. This also causes a drain of billions of dollars every year form the Indian economy. If the Indian economy is to forge ahead & make rapid strides, we have to seriously ponder over how to stem this enormous outflow of Indian talent. We have to restructure higher education system, which will make it attractive to our own foreign bound students. In addition we need to look at export of higher education as a very viable proposal. We shall discuss a possible approach to a new outline of higher education.

New education outline:

The new approach can be formulated by first understanding as to what is expected of the new educational approach. The new system needs to fulfill several expectations & aspirations, and should also

1. meet the demands & expectations of stakeholder's students, teachers, non-teaching staff, parents, employers, and government.
2. significantly enhance the capabilities; employability and self-reliance of students.
3. be flexible enough to allow inter University and inter state movement of students, to accommodate emerging dynamic needs, ability to meet future challenges & to lead to creation of knowledge.
4. must pursue quality in order to achieve standards at par with international acceptance.

This requires that we revisit our national policy or education (NPE). The new policy should create an umbrella structure such as Higher Education Commission (HEC), which will take all existing Commissions and Councils under its wings.

The present system of higher education is based on + 3 structure for the first degree. Many students find it difficult to complete the +3 courses in a fixed time span. Time has therefore come to dispense with this rigid +3 structure, and to seek a more flexible approach of adaptive pace of learning with minimum and maximum duration for completion specified

We also need to take cognizance of to alternative systems to conventional systems (I) Open University and distance education system, and (ii) private non-regulated education system, which specializes in offering short-term job

oriented courses. These two sectors need to be recognized, well regulated and dually accredited. They need to be brought into the main stream of university education in NPE.

Towards this end, we ought to adopt modularized curriculum. Semester and academic year – long courses need to be restricted in to modules with defined hours of instruction and with graded assessment for judging understanding and competence. Such a modularization will bring flexibility in the curriculum to meet the needs of students, industry and society.

Research in Indian universities is fairly well organized, but has produced little impact at applied level. UGC initiatives such as providing online access to research Journals and theses, creating awareness of IPR (intellectual properly rights) and plan to blend research into under and post graduate levels through changes in curriculum and funding deserve to be further strengthened.

UGC has also devised a policy to set up National Student Data Repository (NSDR) as a tool for targeted funding, loan financing and prevention of fraud in higher education system. ICT (information and communication technology) will help in effective implementation of this NSDR policy.

Uniformity of structure, adoption of modularized curriculum with graded assessment, and adaptive pace of learning would lend to pick-and mix university degree. This would facilitate mobility of student from college to college and university to university with wide array of course work. We can even have a joint degree from two universities. Private training institution could, after due accreditation, be integrated into university education scheme for imparting skill based education.

The affiliating stricture of the university system has only promoted mediocrity rather than excellence. As a way out we should have "empowered" autonomous institutions with power to give degree. This would usher in a culture for innovative, effective and accountable governance and management of institution of higher education.

We have to initiate one more aspect to our planning process, viz. utility to our products. Utility may be in terms of employment or for the quest for knowledge. Utility will require a well-organized formal mechanism for understanding the changing scenario of the job market and its implication on relevance of courses offered, modification of existing courses as well as starting new courses. Such as Output Utilization Cell should advice student on selection of courses be taken so as to make their education meaningful. This would fulfill one requirement of our new paradigm, viz. satisfying primary beneficiary viz. students.

Higher education has always remained a public funded sector. It is no doubt a social commitment. But at no time has a strategy been worked out to make it functionally viable. Now, that higher education system has become big, Government is unable to provide the sources needed. As a knee jerk reaction, Government has allowed self-financing institution to mushroom up. However, the self-financed institution has mostly been established by politicians, and has been used for profiteering. The fees charged are so high that only the "creamy layer" of society can afford them. This has naturally led to unrest among poor classes who aspire for access to higher education and thereby to benefit from the economic boom.

One possible way out seems to be set up private institution for non-profit by creating appropriate financing mechanism. We should establish higher education finance commission (HEFC). It could provide soft loans to students and not for profit institution to build up academic and physical infrastructure. To generate resources for HEFC, the government could levy an employment tax compelling every employer to pay, say, one months salary upon employing

a person. The target could encompass industry, business, private and government sector units & offices. This could address the problem of accessibility and affordability of higher education.

India could become a strong competitor to developed countries in attracting foreign students, as well as in opening campuses abroad. For this purpose, we could establish Special Education Zones (SEZS) for attracting foreign students. Public and private universities, singly or by forming consortiums, need to be encouraged to operate in such SEZS. Indeed, the resources so generated could be used to subsidize education of indigenous students. This is, in fact, being done in UK, and some state of USA where fees charged to foreign students are more than double the fees charged to the local students.

Indian higher education system has expanded several folds in recent years. However this expansion has taken place at the price of quality. The spectre of global competition has awakened our higher education system as a factor that will determine our survival. So our higher education system has been caught between insuring quality and providing for over increasing numbers. There is also a conflict between the intrinsic characteristics of search for truth and pursuit of knowledge on the one hand fitness for purpose on the other. Available method of insuring quality seems to be through effective and sound combination of internal self-appraisal, with informed, unbiased, transparent review (i.e. peer review) by an independent accreditation agency. This brings assessment and accreditation of institution of higher education as an additional dimension in our shifting paradigm. The critical dimension of Indian higher education system in the 21st century is going to be pursuit for quality.

8. Conclusion

The legacy of Colonial higher education gave a good start for triggering a revolution in the higher education field in India. It expanded phenomenally meeting some of the aspirations of the people. Nevertheless, the same British legacy also left us with a system, with built-in-deficiencies, which was further abused in the last five and half decades. The net result is that Indian higher education is facing unprecedented crisis: crisis of identity, accountability and quality. We also have non-clarity on vital issues of policy, education as a 'public' and 'private' good, privatization of education, economics of education, export of education, operations of foreign universities and internationalization of education. While moving into the twenty-first century we must search for a new paradigm and that too with a baggage of unavoidable constraints. We do have deep-footed conventional system and relatively new distance and open education system. Their strengths have to be fused for evolving a dynamic approach, which would be able to meet the challenge of convergent social options and divergent social strategies. We have, therefore, proposed hybridized educational outline, which builds on the good points in the conventional and distance education system. We need to have national policy for growth, governance and administration of education. The new economics should be worked out where balance is retained between higher education as a 'merit and non-merit good'.

Reference Material

The author has extensively used several private and official documents, articles, reviews and books -while preparing this document. The fabric of the entire document is interwoven with thoughts, ideas and statements generated through intensive reading of these materials and therefore, as much as the author would have wished, it was impossible to give references in the body of the document. The entire list of reference material is given below in alphabetical order. We gratefully acknowledge all known and unknown (in case of official documents) authors.

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