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Full Length Research Paper

A demand of value based higher education system in India: A comparative study

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Higher education system is essential for national, social and economic development of the country. There is a need of value based higher education system which empowers youth for self sustainability by inculcating employment skills and hence reducing poverty. India's higher education system is the third largest in the world. This paper includes the comparative study of components of value based higher education system of six countries - UK, China, USA, Australia, Brazil and South Africa with India. The paper proposes educational reforms and explains the critical aspects of managing, and delivering superior value of the higher education system in India. This study gives a complete view of the need of value in higher education system in India.

Key words: Higher education system, value-based system, youth empowerment, self-sustainability, educational reforms.

INTRODUCTION

The rising demand for higher education is represented by an increase from 100.8 million tertiary students worldwide in 2000 to 152.5 million in 2007. The higher education sector has undergone major changes throughout the world which led to increased competition for institutions in this sector (Kirp, 2003; Maringe and Gibbs, 2009). According to UNESCO, “higher education is no longer a luxury; it is essential to national, social and economic development”. The quest to achieve Education for All (EFA) is fundamentally about assuring that children, youth and adults gain the knowledge and skills they need to better their lives and to play a role in building more peaceful and equitable societies. This is why focusing on quality is an imperative for achieving EFA. As many societies strive to universalize basic education, they face the momentous challenge of providing conditions where genuine learning can take place for each and every learner. Quality must be seen in light of how societies define the purpose of education (EFA Global Monitoring Report, 2005). Quality improves the value of education. So there is a lot of importance nowadays to increase the value of education. In this paper, a trial was made to explain the demand of value in higher education in India.

The six goals adopted at the World Education Forum in Dakar, Senegal, in April 2000, implicitly or explicitly integrate a quality dimension. The goals are early childhood care and education, universal primary education, youth and adult learning, literacy, gender and quality. Countries that are farthest from achieving goals 1 to 5 are also farthest from achieving goal 6. Several indicators provide information on dimensions of quality. Public expenditure on education represents a higher proportion of GDP in rich countries, where the EFA goals are already achieved, than in poorer ones, where the coverage of under-resourced systems needs to be both expanded and improved. Spending has increased over the past decade in many developing countries, notably in East Asia and the Pacific and in Latin America and the Caribbean. Pupil/teacher ratios remain higher than is desirable in many countries of sub-Saharan Africa (regional median: 44:1) and South and West Asia (40:1). In many low-income countries, teachers do not meet even the minimum standards for entry into teaching and many have not fully mastered the curriculum. The HIV/AIDS pandemic is severely undermining the provision of good education and contributing significantly

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to teacher absenteeism. Data from national and international test scores show that low achievement is widespread in most developing regions. Goal 6, in particular, commits countries, with the support of their EFA partners, to improve all aspects of the quality of education. This results in improvement of the value of education. The central planks of most education systems are expected to ensure that all pupils acquire the knowledge, skills and values necessary for the exercise of responsible citizenship.

The broad objective of education is to create a sizeable population of such educated men and women who could understand the world well enough and are able to bring about a change leading to adequate health and education services, a better environment, and elimination of ignorance and deprivation (limitations), which continue to strangulate the developing societies. The policy, therefore adhering to the principles of equity, quality and efficiency place added emphasis on the education of the people, who are under-privileged and live in misery (Rao, 2004)[1].

In the next few decades, India will probably have the world's largest set of young people. Even as other countries begin to age, India will remain a country of young people. If the proportion of working population to total population increases, that should be reflected in a sharp increase in the country's savings rate. And if India can find productive job opportunities for working population, that would give India a big opportunity to leapfrog in the race for social and economic development and as a result growth rates would go up. China and other countries of South East Asia face the phenomenon of ageing population and India is an exception to this rule. Therefore, it might be India's opportunity to leapfrog in the race for social and economic development. India's youth can be an asset only if there is an investment in their capabilities. A knowledge-driven generation[2] will be an asset. If denied this investment, it will become a social and economic liability. Hence, there must be an investment in building the knowledge base of coming generations (Manmohan, 2005)[3]. Hence there is a requirement of value-based higher education system. India has, today, more than 250 Universities, and many more Research and Development units, and professional colleges and institutions. India has the world's largest chain of publicly funded R&D institutions. On an average, more than 350, 000 engineers and 5,000 Ph.D. scholars graduate from Indian Universities and Colleges every year. With such a vast pool of qualified, English-speaking scientific and technological manpower, India must have the ambition to become a large base of research and a centre for development activity. To achieve this, India must be able to attract global investment into R&D activity at home and should put in place the required legal and physical infrastructure that can attract more foreign investment in R&D activity (Manmohan, 2005).

The National Knowledge Commission's (NKC) recommendations have been crafted to achieve the objective of tapping into India's enormous reservoir of knowledge, to mobilise national talent and create an empowered generation with access to tremendous possibilities. With 550 million below the age of 25, India's demographic dividend is a greatest asset. By recommending reforms in the education and associated sectors, NKC aim has been to provide a platform to harness this human capital, which has the ability to change the course of development in the country. Recommendations have also been sug-gested in other key areas, because to adequately tap this potential, the right development paradigm has to be created by investing in intellectual capital, developing the skill set of the population, strengthening research, encou-raging innovation and entrepreneurship[4] and creating effective systems of e-governance (Sam, 2009)[5].

OBJECTIVES OF THE STUDY

1. To find the factors that helps in creation of value-based higher education.
2. To compare India's higher education with six different countries taken from different continents of the world. These countries are US, UK, Australia, China, Brazil and South-Africa.
3. To give suggestions for improving India's higher education system.

METHODOLOGY

In this paper, the research was based on secondary data taken from different research reports, journals and research papers. The research was based on the comparative study of components of value based higher education of six countries: United States, United Kingdom, Australia, China, South-Africa and Brazil.

INDIAN HIGHER EDUCATION SYSTEM

Since ancient times, India has a strong tradition of higher education. This is evident from centers of learning like the Buddhist monasteries which existed in the 7th century BC and Nalanda which existed in the 3rd century AD (Perkin, 2006). Few of these centers were very large, having several faculties. Invasions and disorder in the country has extinguished ancient Indian education system (Britishers brought western and secular education, with an emphasis on scientific inquiry, to India. The first college was set up

[1] Rao (2004), "Education For All", pp: 255

[2] One in which the generation and the exploitation of knowledge have come to play the predominant part in the creation of wealth.

[3] Dr. Manmohan Singh has remarked on the launch of the Knowledge Commission

[4] Entrepreneurship is the act of being an entrepreneur. Entrepreneurs assemble resources including innovations, finance and business acumen in an effort to transform innovations into economic goods.

[5] Sam Pitroda is a Chairman of National Knowledge Commission. Pitroda, Sam (2009), "Towards a Knowledge Society", NKC Jan Newsletter.

Table 1. Number of teachers in institutions of higher education, 2005-06.

Institution	Enrolment (in thousands)	Teachers (in thousands)	Student:Teacher ratio
University Departments and University Colleges	1427	79	18
Affiliated Colleges	9601	409	23
Total	11028	488	22

Source: University Grant Commission, Annual Report 2005-06.

in 1918 in Serampore, in Bengal, imparting Western education in India. In 1857, three Central Universities of Calcutta, Bombay and Madras were set up, and 27 colleges were affiliated to them. In 1947, 19 Universities were already in existence in India (CABE, 2005), while after independence, higher education system grew rapidly. In 1980, the numbers of Universities were 132 and colleges were 4738 in the country, in which 5% of the eligible age group enrolled in higher education. Student enrolment, which grew between 1987 and 1993, was 7%, but declined to 5.5% at a compound rate of growth. The members of higher education institutes grew from 516 in 1947 to 1948 to 17, 973 in 2005 to 2006 (Government of India, 2007).

The rapid expansion of higher education in India has been at the cost of its quality, in that quality varies with institutions. There are three agencies that evaluate the quality of institutions and programmes. These agencies are evaluated through an external quality assurance in the country. These are the National Assessment[6] and Accreditation Council (NAAC) to accredit institutions of higher education, the National Board of Accreditation (NBA) to accredit programmes in engineering and related areas, and Accreditation[7] which does not protect student from fraud and abuse. Public awareness is very low in India. In India, there is no system of collection and compilation of statistical information on higher education in the country. The Ministry of Human Resource Development of the Central government delegated this responsibility to University Grant Commission (UGC). However, University Grant Commission (UGC) has failed to do so (Agarwal, 2006).

India has more than 9% annual growth rate. In order to sustain the growth rate, there is a need to increase the number and quality of the higher education institutes in India. Therefore Dr. Manmohan Singh, Prime Minister of India, has announced the establishment of

Year Plan (2007 to 2012) for education, the planned amount is Rs. 2500 Billion, a four-fold increase over the previous plan.[8] The numbers of higher educational8 IITs[9], 7 IIMs[10] and 5 IISERs[11] and 30 Central Universities in his speech to the nation on the 60th Independence Day. In the 11th Five institutions in the year 2006 are 355 universities and 18,064 colleges, although there exist 20 Central Universities, 216 State Universities, 101 Deemed Universities, 5 Institutions established through State Legislation and 13 Institutions of National Importance. Enrolment for students was estimated to be currently around 110 Lakh in the Indian higher education system in 2005 to 2006. Figure 2 shows that the growth of student enrolment in higher education in India has been uneven and slow. For instance, while the enrolment grew by 6.7% in 2001 to 2002, it grew by 5.2% in 2005 to 2006. The total number of teachers in the higher education system is 4.88 lakhs as shown in Table 1. Out of the total teaching faculty, 84% were employed in affiliated colleges and only 16% were employed in the universities and university colleges. The student-teacher ratio works out to 18 in the university departments and colleges and 23 in the affiliated colleges. Figure 1 shows the tremendous growth of the higher education system of India. This shows high increase in the number of universities and colleges from year 1950 to 2006.

NEED FOR VALUE BASED INDIAN HIGHER EDUCATION SYSTEM

In the socio-economic development of a nation, human capital has a very crucial role. So, there is a need of investment in education In India, education, particularly higher education, is mostly owned by the public sector.

[6] Assessment gives an idea of the quality of the outputs. Typical outcome of assessment results in a
multi-point grade - numeric or literal or descriptive.

[7] Accreditation is an evaluation of whether an institution (or program) qualifies for a certain status.
Accreditation provides the outcome in a binary scale – yes/no or accredited/not-accredited.

[8] See www.indiaedu.com

[9] The Indian Institutes of Technology (IITs), are a group of fifteen autonomous engineering and technology-oriented institutes of higher education established and declared as Institutes of National Importance by the Parliament of India. The IITs were created to trainscientists and engineers, with the aim of developing a skilled workforce to support the economic and social development of India after independence in 1947.

[10] The Indian Institutes of Management (IIMs) are India's premier management institutes[citation needed] that also conduct research and provide consultancy services in the field of management to various sectors of the Indian economy. They were created by the Indian Government[1] with the aim of identifying the brightest intellectual talent[1] available in the student community of India and training it in the best management techniques available in the world, to ultimately create a pool of elite managers to manage and lead the various sections of the Indian economy.

[11] The Indian Institutes of Science Education and Research (IISER), and the related National Institute of Science Education and Research (NISER) are a group of premier institutes being created by the Government of India to promote education and research in the sciences.

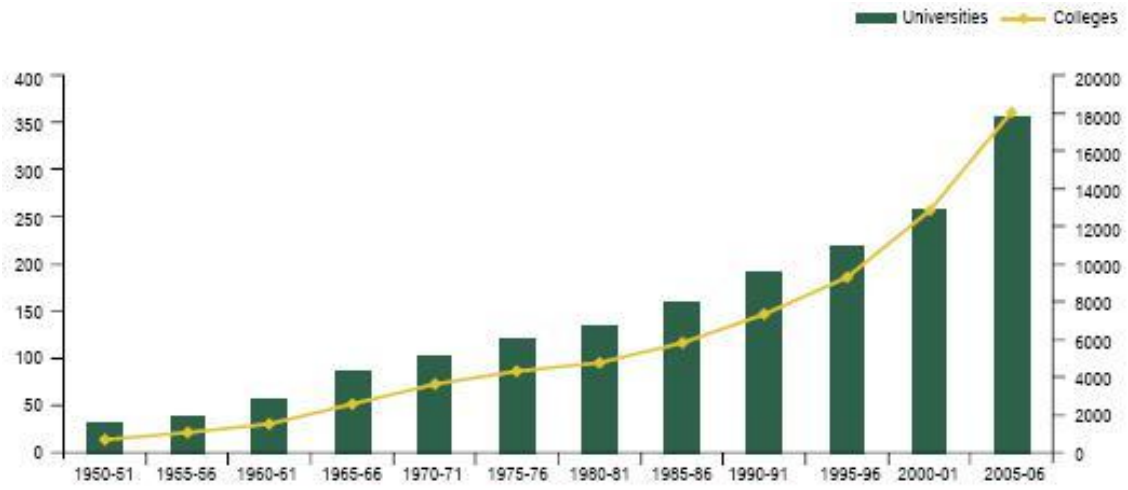

Figure 1. Growth of higher education system. Source: University Grant Commission.

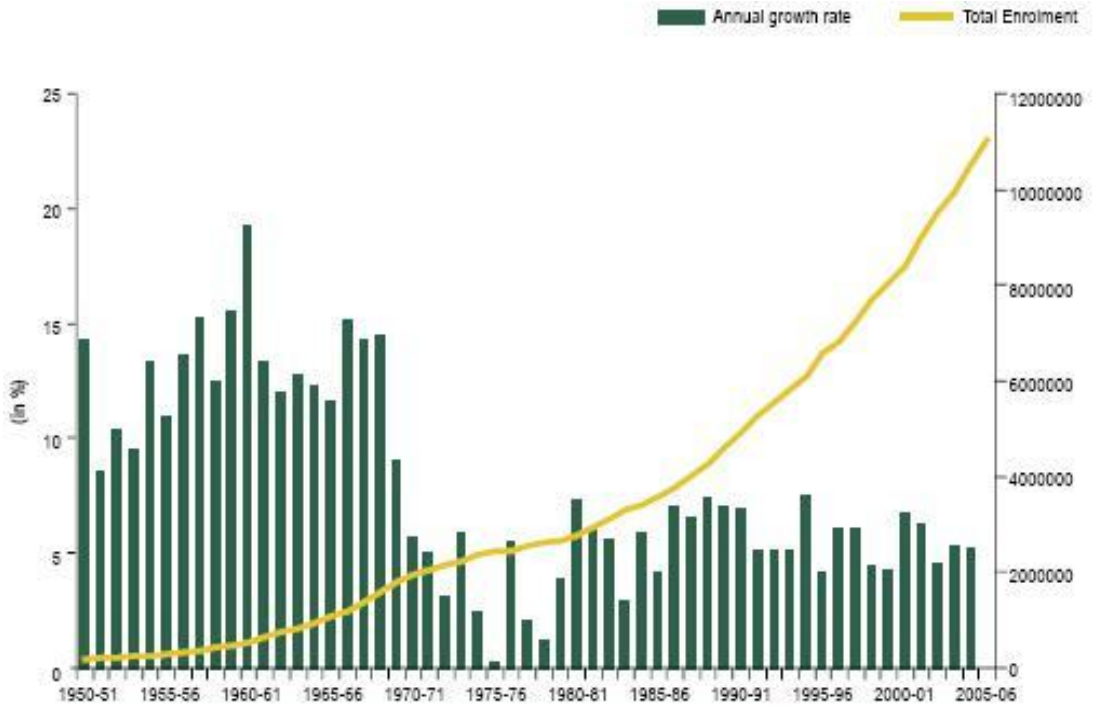

Figure 2. Growth of student enrolment in higher education in India (1950-51 to 2005-06).
Source: University Grant Commission.

Hence, the role of the State is very important in making literacy levels high. Private sector role is also increasingly becoming important because of wrong kind of state intervention or too little state intervention. About 0.37% of GDP[12] is spent on higher education in India and this is also falling in recent years. Therefore, education in developed countries, have been able to have "market complementary arrangements"[13] rather than "market excluding arrangements"[14] which will result into widespread literacy levels (Government of India, 2007).

The government of India has pursued a five-fold strategy following the recommendations of the NPE[15]

[12] Government of India, 2006

[13] Education according to the market requirements like professional courses eg: MBA, MCA, CA, CS, etc.

[14] Education not according to the market requirements.

[15] National Policy on education

Table 2. Gross enrolment ratio (GER) for 18-24 years (in percentage).

Year	Higher Education
2001-02	8.07
2002-03	8.97
2003-04	9.21
2004-05	9.97

Source: Ministry of Human Resource Development.

Table 3. Current Quality Status in Colleges of Higher Education in India (2005).

Details	Number (%)
Total umber of colleges	17,625
Number of colleges under UGC purview	14,000
Number of colleges recognized under Section 2(f) of UGC Act	5,589 (40)
Number of colleges recognized under Section 12(B) of UGC Act	5,273 (38)
Number of colleges actually funded by the UGC	4,870 (35)
Number of colleges accredited by the NAAC	2,780 (20)
Number of colleges accredited by the NAAC and scoring above 60 per cent	2,506 (17.9)

Source: Ministry of Human Resource Development.

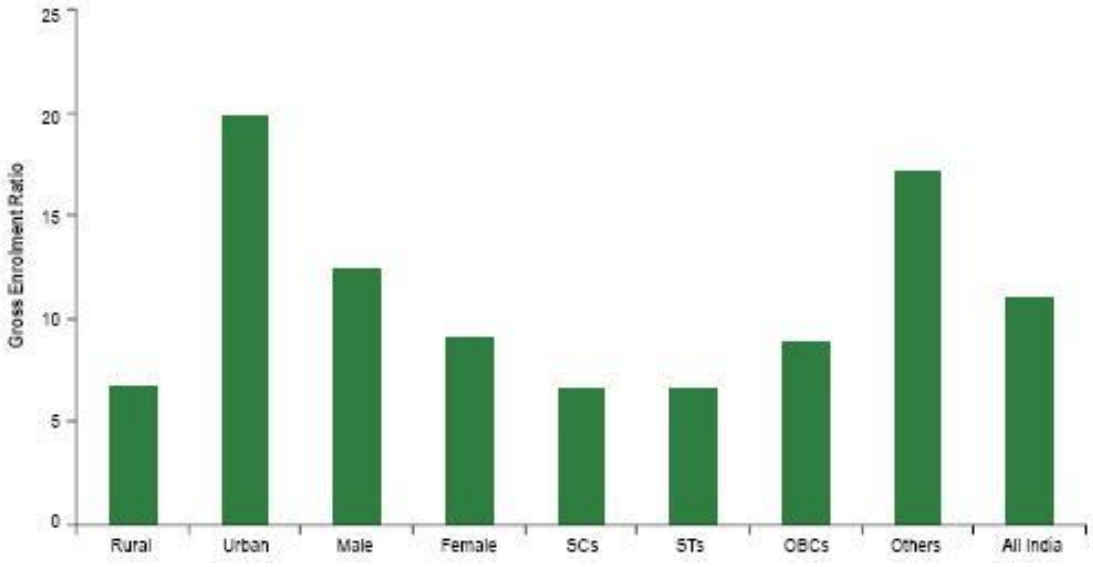

Figure 3. Disparities in enrolment in higher education (2004-05).
Source: UGC.

consisting of the following:

1. Improvement of infrastructural provision and human resources for education.
2. Provision of improved curriculum and teaching-learning material.
3. Improve the quality of teaching – learning process through the introduction of child-centered pedagogy.
4. Attention to teacher capacity building.
5. Increased focus on specification and measurement of learner achievement levels.

Quality improvement in education cannot be carried out on a turn-key basis in a specified time-frame. So moving in all fronts mentioned in the strategy will make improvements in the quality of education. Keeping this in view, a number of programmes and schemes have been initiated by the central as well as state governments. Also, quality improvement component has been given high priority in all the EFA projects (Rao, 2004).

There are some issues in the current Indian higher

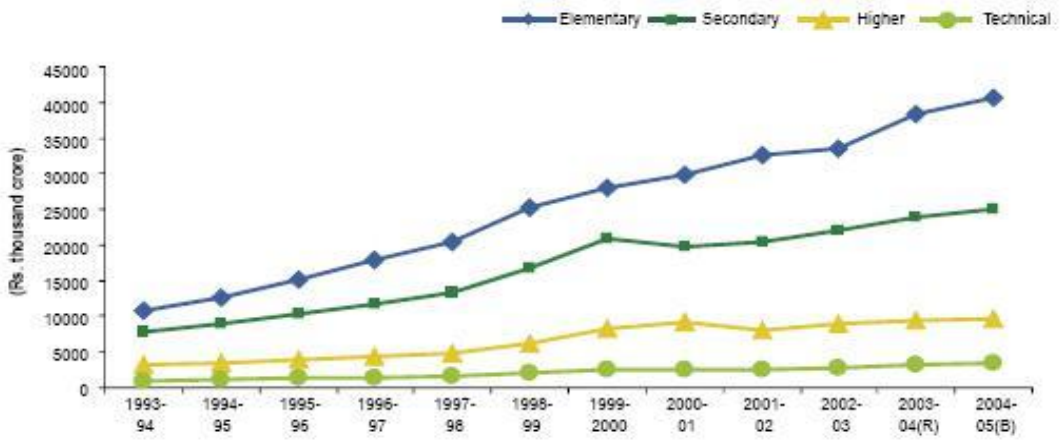

Figure 4. Sector-wise plan and non-plan budgeted expenditure for education Departments of State and Centre (Revenue Account). Source: Ministry of Human Resource Development.

education system framework which are as follows.

Expansion

The current enrolment in higher education stands at about 11 million. While there has been a consistent growth in enrolment in higher education over the last few years, this is not enough when compared to other countries (Figure 2). The gross enrolment ratio for higher education (percentage of the 18 to 24 age group enrolled in a higher education institution) is around 8 to 10%, whereas it is 25% for many other developing countries (Table 2). Various committees[16] that have examined the higher education scenario in India have recommended an increase in the GER to at least 20%. If India has to achieve the target soon, it would imply more than doubling the scale and size of the higher education system within the next 5 to 7 years. Table 2 shows the GER for 18 to 24 years in percentage. According to Table 3, the percentage of GER shows increase every year from 2001 to 2005. In 2002 to 2003, the percentage increase was 0.90 from the last year, which showed the maximum increase during 2001 to 2005. The lowest increase was 0.24 in 2003 to 2004 in comparison to the last year.

Access

With high disparities, inclusive education has remained an elusive target. Inter-caste, male-female and regional disparities in enrolment still remain prominent. For example, while the gross enrolment ratio for people living in urban areas was almost 20%, it was only 6% for rural areas. Further, the gross enrolment ratio for Scheduled Tribes (STs), Scheduled Castes (SCs) and Other Backward Classes (OBCs) was 6.57, 6.52 and 8.77, respectively, and was much lower than all GER in India (Figure 3).

Regulation

The regulatory structures in the current higher education system are cumbersome. Entry through legislation alone, at present, is a formidable barrier. It requires an Act of Legislature of Parliament to set up a university. The deemed university route is much too difficult for new institutions. The consequence is a steady increase in the average size of existing universities with a steady deterioration in their quality. A vast majority of the colleges are not recognized by UGC under section 2(f) of UGC Act.[17] This poses a great challenge for the UGC in respect of maintenance of the standard of teaching and examination in higher education. Also, the current system of affiliated colleges for undergraduate colleges is not adequate. These are affiliated to large unwieldy universities, making it difficult to monitor the standard of education being imparted. Currently, about 90% of the undergraduate enrolment and 67% of the postgraduate enrolment is in the affiliated colleges. There are a large number of institutions that are technically under the purview of the UGC but are not provided by financial support because they fail to fulfill the minimum eligibility norms.

Faculty

Shortage of quality faculty is one of the main problems

[16] The CABE, Committee on Financing of Higher Education concluded on the basis of international experience that an enrolment rate of 20 per cent or more is consistent with a turnaround in economic performance.

[17] Universities recognized by the University Grants Commission under section 2(f) and 12B of the UGC Act, 1956.

affecting higher education in India today. Teacher shortages often occur due to non availability of suitably qualified people. Further, the academic profession has seen a steady decline in popularity – as a result of lack of incentives and more lucrative opportunities in other professions. Apart from increasing compensation of teachers, there is also a need to introduce performance-based incentives in order to ensure teaching of superior quality.

Funding

Public expenditure (Centre and States) on education is only around 3.6% of GDP. Government funding of higher education is still below 1% of GDP. The percentage expenditure on University and Higher Education to GDP, which was 0.77% in 1990 to 1991 showed a gradual decrease to 0.66% in 2004 to 2005. Various committees have unanimously recommended that state funding should be increased to 6%. While the Central Advisory Board for Education (CABE) recommends spending 1% for higher education and 0.5% for technical education, the proportions in 2004 to 2005 are 0.34% for higher education and 0.03% for technical education. India also has one of the lowest public expenditure on higher education per student at 406 US Dollars (Figure 4).

Private Institutions

The share of private unaided higher education institutions increased from 42.6% in 2001 to 63.21% in 2006. Their share of enrolments also increased from 32.89 to 51.53% in the same period. This trend is likely to continue and therefore, it is reasonable to expect that about half of the incremental enrolment targeted for higher education will come from private providers. There is a need for the state to recognize the role of the private sector and encourage their participation. There has already been a de-facto privatization of the professional education sector, with more than 80% of the engineering colleges being privately funded and managed. While there are strict entry barriers for the private sector, there is not enough regulation on the products and outputs of the private sector.

Accreditation

Accreditation in higher education pertains to determining the quality of an institution. The criteria on which institutions are judged typically involve expected student achievement, quality of curriculum, faculty, academic support and services for students, and financial capacity. In India, accreditation is performed by government agencies. The National Assessment and Accreditation Council (NAAC) was set up by the UGC in 1994 to accredit institutions of higher education. The NAAC's assessment is based on the pre-determined criteria that combine self-study and peer review. NAAC accredits and certifies for educational quality in institutions based on seven criteria with different weights for each criterion, and for different types of institutions. NAAC has so far completed accreditation of only 140 out of the 355 universities and 3,492 out of the 18,064 colleges. This covered just over 10% of all institutions, and barely any private colleges and universities. The results of the accreditation process thus far indicate serious quality problems. However, very few institutions have been applied for accreditation by NAAC.

Quality

There are concerns about the quality of higher education provided in India currently. There is an annual outflow of more than 150,000 students to institutes in the west every year – driving out nearly 2 to 3 billion dollars in foreign exchange per annum. It makes India the second-largest target market globally for education institutes in the west. Although the problem of reaching world class standards is not as pressing as meeting the larger needs of the population, India's standing in this regard is indicative perhaps of the generally low standards. In a London Times Higher Education Supplement ranking of the top 200 universities, only 1 Indian institution was listed, while the Shanghai University ranking of 500 world-class universities featured only 3 Indian universities (Figure 5).

COMPARATIVE ANALYSIS

There are various factors on which the comparative analysis of India's higher education system with six countries is performed. The countries are United States, United Kingdom, Australia, China, South-Africa and Brazil. These factors are: (1) Education inputs and participation in education; (2) Rankings in global competitiveness report related with higher education system; (3) Human development index and public expenditure on education; (4) Tertiary education: Enrolment and teaching staff; (5) Tertiary Education: Internationally mobile students by host country and region of origin; (6) International flow of mobile students.

Education inputs

The education inputs depend on the public expenditure on education. Table 4 shows the public expenditure of the seven countries. Public expenditure in the year 1999 and the maximum public expenditure per student with the

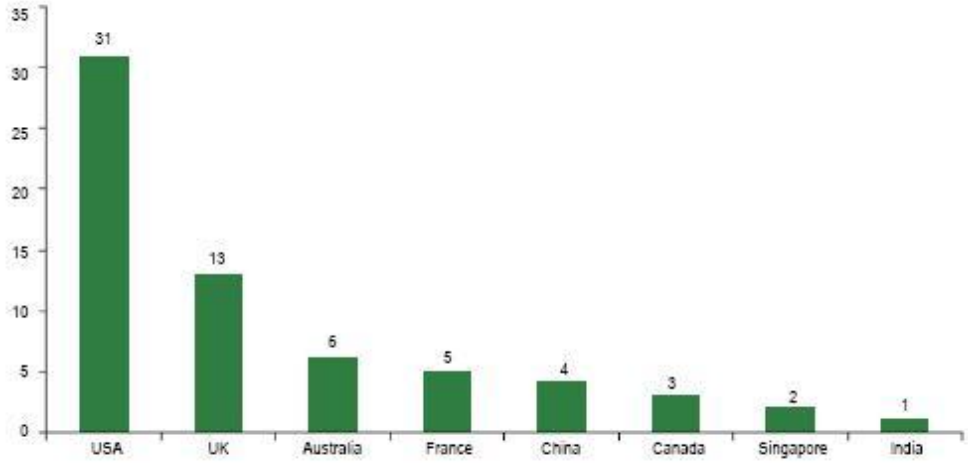

Figure 5. Country wise number of universities in times top 100 universities.
Source: Times Higher Education Supplement, London.

Table 4. Education inputs.

Country	Public Expenditure per student % of GDP per capita Tertiary		Public Expenditure on education	
			% of GDP	% of total government expenditure
	1999	2006	2006	2006
Australia	25.7	22.5	4.6	-
Brazil	57.0	32.6	4.0	-
China	90.1	-	-	-
India	90.8	61.0	3.8	-
South-Africa	60.7	50.1	5.4	17.6
United Kingdom	26.2	27.6	5.4	11.7
United States of America	27.0	23.5	5.6	14.4

Source: 2008 World Development Indicators, The World Bank, pp: 76-79.

percentage of GDP[18] per capita are spent by India. In the year 2006, India also spent their maximum percent-tage, but the maximum public expenditure on education, which is the percentage of GDP, was spent by US and the minimum by India. The percentage of the total government expenditure spent on education is maximum by South-Africa and minimum by UK.

PARTICIPATION IN EDUCATION

Participation in tertiary education can be checked by the Gross Enrolment Ratio (GER). The gross enrollment ratio (GER)[19] or gross enrollment index (GEI) is a statistical measure used in the education sector and by the UN in its education index. The GER gives a rough indication of the level of education from kindergarten to postgraduate education – known in the UK and some other countries (mostly in the Commonwealth of Nations) as primary, secondary and/or tertiary – amongst residents in a given jurisdiction. In the UN, the GER is calculated by expressing the number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels.

Table 5 shows gross enrolment ratio in tertiary education. According to the table, GER of India is increasing at a very slow rate. China's GER is increasing every year

[18]GDP: The gross domestic product (GDP) or gross domestic income (GDI) is a measure of a country's overall official economic output. It is the market value of all final goods and services officially made within the borders of a country in a year. It is often positively correlated with the standard of living though its use as a stand-in for measuring the standard of living has come under increasing criticism and many countries are actively exploring alternative measures to GDP for that purpose.

GDP = private consumption + gross investment + government spending + (exports − imports)

[19]GER = number of actual students enrolled / number of potential students enrolled

tremendously. USA is always at the top of GER. So steps must be taken by Indian government to increase GER as GER is the lowest among all six nations.

RANKINGS IN GLOBAL COMPETITIVENESS[20]: REPORT RELATED WITH HIGHER EDUCATION SYSTEM

The World Economic Forum has, for the past 30 years, played a facilitating role in this process by providing detailed assessments of the productive potential of nations worldwide. The 'report' is a contribution to enhancing the understanding of the key factors determining economic growth and to explaining why some countries are more successful than others in raising income levels and opportunities for their respective populations; hence, it offers policymakers and business leaders an important tool in the formulation of improved economic policies and institutional reforms. The 'report' contains a detailed profile for each of the economies featured in the study as well as an extensive section of data tables with global rankings covering over 100 indicators.

The GCI captures this open-ended dimension by providing a weighted average of many different components, each of which reflects one aspect of the complex concept that is competitiveness. The Global Economic Forum groups these components into '12 pillars of competitiveness':

1. Institutions.
2. Infrastructure.
3. Health and primary education.
4. Macroeconomic stability.
5. Higher education and training.
6. Goods market efficiency.
7. Labor market efficiency.
8. Financial market sophistication.
9. Technological readiness.
10. Market size.
11. Business sophistication.
12. Innovation.

Table 6 shows the overall rank based on the above mentioned pillars. India is comparatively at a very low position. The score in the table lies in between 0 and 7. So, the score of India is continuously decreasing since the last 3 years. China and Brazil are the only countries that have shown improvement in the scores and hence improvements in ranks.

According to the GCI, in the first stage, the economy is 'factor-driven' and countries compete based on their factor endowments: primarily unskilled labor and natural resources. Companies compete on the basis of price and sell basic products or commodities, with their low productivity reflected in low wages. Maintaining competetiveness at this stage of development hinges primarily on well-functioning public and private institutions (Pillar 1), well-developed infrastructure (Pillar 2), a stable macroeconomic framework (Pillar 3), and a healthy and literate workforce (Pillar 4). As wages rise with advancing development, countries move into the 'efficiency-driven' stage of development, when they must begin to develop more efficient production processes and increase product quality. At this point, competitiveness is increasingly driven by higher education and training (Pillar 5), efficient goods markets (Pillar 6), well-functioning labor markets (Pillar 7), sophisticated financial markets (Pillar 8), a large domestic and/or foreign market (Pillar 10), and the ability to harness the benefits of existing technologies (pillar 9). Finally, as countries move into the 'innovation-driven' stage, they are able to sustain higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. Also, companies must compete through innovation (Pillar 12), producing new and different goods using the most sophisticated production processes (Pillar 11).

The concept of stages of development is integrated into the index by attributing higher relative weights to those pillars that are relatively more relevant for a country given its particular stage of development. That is, although all 12 pillars matter to a certain extent for all countries, the relative importance of each one depends on a country's particular stage of development. To take this into account, the pillars are organized into three subindexes, each critical to a particular stage of development. The 'basic requirements subindex' groups those pillars most critical for countries in the factor-driven stage. The 'efficiency enhancers' subindex' includes those pillars critical for countries in the efficiency-driven stage, and the 'innovation and sophistication factors subindex' includes the pillars critical to countries in the innovation- driven stage. The three subindexes are shown in Figure 6. However, the specific weights we attribute to each subindex in every stage of development are shown in Table 7.

Countries falling in between two of the three stages are considered to be "in transition". For these countries, the weights change smoothly as a country develops, reflecting the smooth transition from one stage of development to another. By introducing this type of transition between stages into the model - that is, by placing increasingly more weight on those areas that are becoming more important for the country's competitiveness as it develops - the index can gradually "penalize" those countries that are not preparing for the next stage. The classification of countries into stages of development is shown in Table 8.

Table 9 shows the global competitiveness index with respect to efficiency enhancers and also higher education and training. It also shows the stage of development of all seven countries. India is the only country which is factor-

[20] Definition of Competitiveness by World Economic Forum: Competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy.

Table 5. Participation in education.

Country	Tertiary - Gross Enrolment Ratio		
	1980	2000	2006
Australia	25	63	73
Brazil	11	17	24
China	2	7	22
India	5	10	11
South-Africa	-	15	15
United Kingdom	19	60	59
United States of America	56	73	82

Source: World Development Indicators (2003; 2008), The World Bank, pp: 80-83; 76-79.

Table 6. Global Competitiveness Index.

Region	2009-2010 rank and score (out of 133)	2008-2009 rank and score (out of 134)	2007-2008 rank and score (out of 131)	2006-2007 rank and score (out of 131)
USA	2 (5.59)	1 (5.74)	1 (5.7)	1 (5.8)
United Kingdom	13 (5.19)	12 (5.30)	9 (5.4)	2 (5.6)
Australia	15(5.15)	18 (5.20)	19 (5.2)	16 (5.2)
China	29 (4.74)	30 (4.70)	34 (4.6)	34(4.6)
South Africa	45 (4.34)	45 (4.41)	44 (4.4)	35 (4.5)
India	49 (4.30)	50 (4.33)	48 (4.3)	42 (4.5)
Brazil	56 (4.23)	64 (4.13)	72 (4.0)	66 (4.1)

Source: Global Competitiveness Report (2009-2010), World Economic Forum.

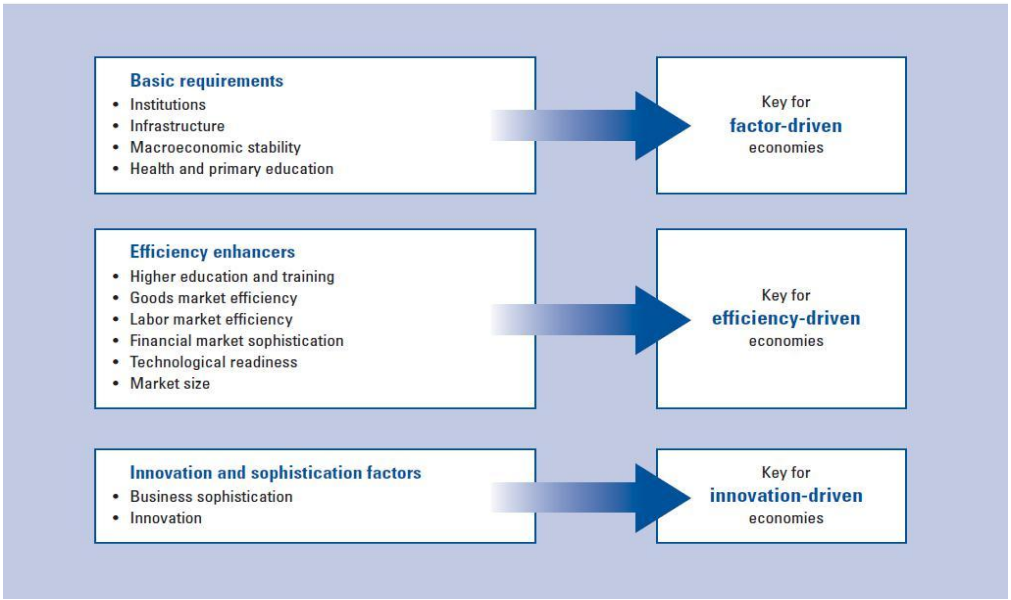

Figure 6. The 12 pillars of competitiveness (Source: Global Competitiveness Report 2009-2010).

driven and the rests are in a better stage of development than India. In case of factors related with efficiency enhancers, India rank is lower than US, UK, Australia and China according to GCI stated in Table 9, but it has scored better than others. India has also shown increase in scores related with efficiency enhancers from year2008 to 2009, but in higher education and training, the rank and score of India is the lowest. However, Australia's rank and

Table 7. Weights of the three main subindexes at each stage of development.

Sub-index	Factor-driven stage (%)	Efficiency-driven stage (%)	Innovation-driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

Source: Global Competitiveness Report (2009-2010).

Table 8. Income thresholds for establishing stages of development.

Stage of development	GDP per capita (in US$)
Stage 1: Factor driven	<2000
Transition from stage 1 to stage 2	2,000 – 3,000
Stage 2: Efficiency driven	3,000 – 9,000
Transition from stage 2 to stage 3	9,000 – 17,000
Stage 3: Innovation driven	>17,000

Table 9. The global competitiveness index- The efficiency enhancers.

Country	Stage of development	Efficiency enhancers				Higher education and training			
		Rank(out of 134)		Score (1-7)		Rank		Score	
		09-10	08-09	09-10	08-09	09-10	08-09	09-10	08-09
Australia	Innovation-driven	9	10	5.29	5.3	14	14	5.33	5.4
Brazil	Efficiency- driven	42	51	4.41	4.3	58	58	4.14	4.1
China	Transition 1-2	32	40	4.56	4.4	61	64	4.09	4.1
India	Factor- driven	35	33	4.52	4.5	66	63	3.96	4.1
South-Africa	Efficiency driven	39	35	4.47	4.46	65	57	4.00	4.13
United Kingdom	Innovation-driven	8	4	5.31	5.5	18	18	5.17	5.3
United States of America	Innovation-driven	1	1	5.66	5.8	7	5	5.57	5.7

Source: Global Competitiveness Index (2009-2010), World Economic Forum.

Australia's rank and score are the highest. Only Brazil has shown improvement in score and in the other countries, the score has decreased in 2009 to 2010 in comparison to 2008 to 2009.

In Tables 10 and 11, the various factors which affect higher education and training in a country are shown. These are:

1. Secondary enrolment.
2. Tertiary enrolment.
3. Quality of the educational system.
4. Quality of math and science education.
5. Quality of management schools.
6. Internet access in schools.
7. Local availability of research and training services.
8. Extent of staff training.

All these factors for the seven countries are compared in Table 10. The rank and score of each country are compared with others using GCI. In Table 11, the difficult data data of the countries are presented.

According to Tables 10 and 11, India has some competitive advantages in this respect which are quality of the educational system, quality of math and science education, quality of management schools, local availability of research and training services, and the extent of staff training. It is better using the same factors for China and Brazil. In these tables, the following are derived:

a) Secondary enrollment: Gross secondary education enrollment rate.

b) Tertiary enrollment: Gross tertiary education enrollment rate.

c) Quality of education system: How well does the educational system in your country meet the needs of a competitive economy? (1 = not well at all; 7 = very well), 2008 to 2009, weighted average.

d) Quality of math and science education: How would you assess the quality of math and science education in your country's schools? (1 = poor; 7 = excellent- among the

Table 10. 5th Pillar higher education and training: Country ranks.

Country/Economy	Secondary enrolment		Tertiary enrollment		Quality of the educational system		Quality of math and science education		Quality of management schools		Internet access in schools		Local availability of research and training services		Extent of staff training	
	08-09	09-10	08-09	09-10	08-09	09-10	08-09	2009-10	08-09	09-10	08-09	09-10	08-09	09-10	08-09	09-10
Australia	1*	1*	15*	13*	9*	14*	19 #	30#	11*	18 #	18 #	25 #	15*	17 #	17*	18 #
Brazil	14*	25*	76 #	73 #	117 #	103 #	124 #	123 #	58 #	66 #	67#	64 #	26*	29*	46 *	52 #
China	92 #	89 #	81 #	80 #	55 #	52 #	38 #	35 #	74 #	72 #	33 #	23*	39 #	47 #	42 #	50 #
India	104 #	107 #	98 #	100 #	37*	37*	17*	22*	12*	15*	60 #	67 #	32 *	32*	34 *	34*
South-Africa	44*	39*	93 #	94 #	110 #	119 #	132 #	133 #	25*	30*	91#	100 #	29*	40 #	15*	21*
United States of America	48 #	43 #	6*	6*	19 #	22 #	48 #	48 #	3*	4*	11 #	10*	1*	3*	6*	8*
United Kingdom	34 #	36 #	26 #	30 #	28 #	30 #	47 #	52 #	18 #	16 #	15 #	17 #	9*	9*	22 #	26 #

*Competitive Advantage; # Competitive Disadvantage.
Source: 2009-2010 Global Competitiveness Index, World Economic Forum.

Table 11. 5th Pillar Higher education and training: Hard data.

Country/Economy	Gross secondary education enrollment rate	Gross tertiary education enrollment rate	Quality of the educational system	Quality of math and science education	Quality of management Schools	Internet access in schools	Local availability of specialized research and training services	Extent of staff training
Australia	148.6	75.1	5.2	4.9	5.3	5.3	5.3	4.8
Brazil	100.1	30.0	3.0	2.7	4.1	3.7	4.8	4.2
China	77.3	22.9	3.8	4.8	4.0	5.4	4.4	4.2
India	54.6 (5)	11.8 (5)	4.4	5.0	5.4	3.6	4.7	4.5
South-Africa	97.1	15.4	2.6	2.1	4.8	2.8	4.6	4.8
United States of America	94.2	81.7	4.8	4.5	5.9	5.9	6.0	5.3
United Kingdom	97.5	59.1	4.6	4.4	5.4	5.7	5.6	4.7

Source: Global Competitiveness Index (2009-2010), World Economic Forum Years representation by: 1:2001, 2: 2002, 3: 2004, 4: 2005, 5: 2006, 6:2008.

- among the best in the world), 2008 to 2009, weighted average.

e) Quality of management schools: How would you assess the quality of management or business schools in your country? (1 = poor; 7 = excellent - among the best in the world), 2008 to 2009 weighted average.

f) Internet access in schools: How would you rate the level of access to the internet in schools in your country? (1 = very limited; 7 = extensive), 2008 to 2009 weighted average.

g) Local availability of specialized research and training services: In your country, to what extent are high-quality, specialized training services available? (1 = not available; 7 = widely available), 2008 to 2009 weighted average.

h) Extent of staff training: To what extent do companies in your country invest in training and employee development? (1 = hardly at all; 7 = to a great extent), 2008 to 2009 weighted average.

Human development index[21]

The United Nations Development Program (UNDP)

[21] The Human Development Index (HDI) is a composite statistic used to rank countries by level of "human development" and separate developed (high development), developing (middle development), and underdeveloped (low development) countries. The statistic is composed from data on life expectancy, education and per-capita GDP (as an indicator of standard of living) collected at the national level using the formula given in the Methodology section.

(UNDP) introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income into a composite human development index, the HDI. The breakthrough for the HDI was the creation of a single statistic which was to serve as a frame of reference for both social and economic development. The HDI sets a minimum and a maximum for each dimension, called goalposts, and then shows where each country stands in relation to these goalposts, expressed as a value between 0 and 1. The educational component of the HDI comprised adult literacy rates and the combined gross enrolment ratio for primary, secondary and tertiary schooling, weighted to give adult literacy more significance in the statistic. Since the minimum adult literacy rate is 0% and the maximum is 100%, the literacy component of knowledge for a country where the literacy rate is 75% would be 0.75; thus, the statistic for combined gross enrolment is calculated in an analogous manner.

Table 12 shows the ranks of all seven countries. India is the lowest in HDI among all the countries. From year 1975 to 2005, India and China has shown a lot of improvement in the score related with HDI.

PUBLIC EXPENDITURE ON EDUCATION

Table 13 shows public expenditure on education. It also shows the percentage of GDP and percentage of total Government expenditure on education. According to the table, among all the countries, India spends the lowest on education in the year 2005. In the year 2000, China spent the lowest and India had a better position in spending on education. In the year 1990, 1980 and 1970, India spent a very less percentage of GDP on education, lower than other countries except China. However, China spent the lowest in these years.

INTERNATIONAL FLOW OF MOBILE STUDENTS

In the Table 14, the total enrollment was highest in China in the year 2006. India was on the third position after United States. In the year 1999, GER was highest in United States and India was on the second last position before China. GPI (related with GER) in 1999, was highest in US and lowest in India. In 2006, the GPI (related with GER) was highest in the United States and the GPI of India was lowest when compared with others. As regards GER in 2006, Indian is on the lowest position and US was on the highest position. Teaching staff in the year 2006 was highest in China and the lowest in South-Africa. India stands on the better position when compared with other countries. So, the overall India's position is poor in the case of GER, teaching staff; hence, it needs a lot of improvement.

Table 15 shows the international flow of mobile students for education of the countries. The number of students studying abroad is highest in China and India comes after it. South-Africa has least number students studying abroad. The number of students from abroad studying is maximum in United States and Australia comes on the second position. India comes on the second last position and Brazil comes on the last position. So, net flow ratio of mobile students is maximum in Australia and minimum in China.

TERTIARY EDUCATION: INTERNATIONALLY MOBILE STUDENTS BY HOST COUNTRY AND REGION OF ORIGIN

Table 16 shows the inbound mobility rate of the students from abroad studying in the countries. Inbound mobility rate in maximum in Australia and minimum in China.

TERTIARY EDUCATION: ENROLMENT AND TEACHING STAFF

Gender-specific EFA index (GEI). The GEI is a composite index that is calculated as the simple average of three gender parity indices (GPI):

(a) GPI for the gross enrolment ratio (GER) in primary education: GPI = female GER/ male GER.

(b) GPI for the GER in secondary education: GPI = female GER/ male GER.

(c) GPI for the adult literacy rate: GPI = female literacy rate/ male literacy rate.

(d) If the calculation method for one of the three GPIs yields a value above 1 (because the female GER is greater than the male GER, or because the female literacy rate is greater than the male literacy rate), the calculation method is reversed. In such cases, the GPI is calculated as male GER/ female GER, or as male literacy rate/ female literacy rate

FINDINGS

(a) In the Higher Education System of India, there is tremendous growth in the number of universities and colleges from the year 1950 to 2006.

(b) The percentage of GER of India shows increase every year from 2001 to 2005. In 2002 to 2003, the percentage increase was 0.90 from the last year, which was the maximum during 2001 to 2005. However, the lowest increase was 0.24 in 2003 to 2004 in comparison to the last year.

(c) The gross enrolment ratio for people living in urban areas was almost 20%, while it was only 6% for rural areas. Further, the gross enrolment ratio for Scheduled Tribes (STs), Scheduled Castes (SCs) and Other Back ward Classes (OBCs) is 6.57, 6.52 and 8.77 respectively, which is much lower than the other GER in India.

Table 12. Human Development Index, 1975-2005.

Rank	Country/Region	1975	1980	1985	1990	1995	2000	2005	
3	Australia		0.851	0.868	0.88	0.894	0.934	0.949	0.962
12	United States	0.87	0.89	0.904	0.919	0.931	0.942	0.951	
16	United Kingdom	0.853	0.86	0.87	0.89	0.929	0.931	0.946	
70	Brazil	0.649	0.685	0.7	0.723	0.753	0.789	0.800	
81	China	0.53	0.559	0.595	0.634	0.691	0.732	0.777	
121	South Africa	0.65	0.67	0.699	0.731	0.745	0.707	0.674	
128	India	0.419	0.45	0.487	0.521	0.551	0.578	0.619	

Source: UNDP (2008).

Table 13. Public expenditure on education.

Country	2005		2000		1990		1980		1970	
	% of GDP	% of total government expenditure	% of GDP	% of total government expenditure	% of GDP	% of total government expenditure	% of GDP	% of total government expenditure	% of GDP	% of total government expenditure
Australia	4.5	-	4.7	13.3	4.5	12.7	5.1	15.0	3.6	13.0
Brazil	4.0	-	4.0	12.0	4.4	-	3.5	-	2.9	10.6
China	-	-	1.9	13.0	2.3	12.8	2.5	9.3	1.3	4.3
India	3.7	10.7	4.4	12.7	3.7	11.2	2.9	10.4	2.4	10.7
South-Africa	5.3	17.9	5.6	18.1	5.1	-	-	-	-	-
United Kingdom	5.6	12.5	4.6	11.4	4.7	-	5.3	13.6	5.3	14.1
United States	5.3	13.7	5.7	17.1	5.6	12.3	6.5	20.1	7.4	22.7

Source: Global Education Report (2008), UNESCO.

Table 14. International flow of mobile students.

Country	Students from a given country studying abroad			No. of students from abroad studying in given country (Inbound mobile students)	Net flow of mobile students	
	MF	Outbound mobility ratio (%)	Gross outbound enrolment ratio		MF	Net flow ratio (%)
Australia	9833	1.0	0.7	207264	197721	19.0
Brazil	19978	0.4^{-1}	0.1	1117	18365	-
China	417351	2.0	0.4	38386	-380965	-1.6
India	139459	1.1	0.1	7589	119340^{-1}	0.9
South-Africa	6638	0.9	0.1	53738	47100	6.4
United Kingdom	26922	1.2	0.7	330078	303156	13.0
United States	48329	0.3	0.2	584814	536485	3.1

Source: Global Education Report (2008), UNESCO, pp: 120-124.

Table 15. Tertiary Education/ISCED 5 and 6/Internationally mobile students by host country and region of origin/2006 (countries having more than 1000 mobile students).

Host country or territory	Students from abroad studying in given country (inbound mobile students)	
	MF	Inbound mobility rate (%)
Australia	207264	20.2
Brazil	1117	-
China	36386	0.2
India	7589	0.1
South-Africa	53738	7.2
United Kingdom	584814	3.3
United States	330078	14.1

Source: Global Education Report (2008), UNESCO, pp: 115-118.

Table 16. Tertiary education: Enrolment and teaching staff.

Country	Total enrollment	Gross enrolment rate				Gross graduation ratio		Teaching staff
	2006	1999		2006		2006		2006
	MF(000)	MF	GPI	MF	GPI	MF	GPI	MF(000)
Australia	1040	65	1.22	73	1.28	63	1.53	-
Brazil	4572	14	1.26	25	1.36	-	-	293
China	23361	6	-	22	0.98	12	0.88	1332
India	12853	10	0.66	12	0.72	-	-	539
South-Africa	741	14	1.16	15	1.24	5	142	44
United Kingdom	2336	60	1.16	59	1.40	40	1.36	126
United States	17487	73	1.31	82	1.41	35	1.42	1290

Source: Global Education Report (2008), UNESCO, pp: 106-114.

(d) The deemed university route is much too difficult for new institutions. The consequence is a steady increase in the average size of existing universities with a steady deterioration in their quality. A vast majority of the colleges are not recognized by UGC under section 2(f) of UGC Act. This poses a great challenge for the UGC in respect of maintenance of standard of teaching and examination in higher education.

(e) India also has one of the lowest public expenditure on higher education per student at 406 US Dollars.

(f) The share of private unaided higher education institutions in India increased from 42.6% in 2001 to 63.21% in 2006.

(g) NAAC has so far completed accreditation of only 140 out of the 355 universities and 3,492 out of the 18,064 colleges. This covered just over 10% of all institutions, and barely any private colleges and universities. The results of the accreditation process thus, far indicate serious quality problems. However, very few institutions have applied for accreditation by NAAC.

(h) There is an annual outflow from India of more than 150,000 students to institutes in the west every year – driving out nearly 2 to 3 billion dollars in foreign exchange per annum. It makes India the second-largest target market globally for education institutes in the West.

(i) Public expenditure in the year 1999 and maximum public expenditure per student with the percentage of GDP[22] per capita was spent by India. In the year 2006 also, India had the maximum spending, but the maximum public expenditure on education, that is, percentage of GDP, was spent by US and the minimum by India.

(j) GER of India is increasing at a very slow rate.

(k) Global Economic Forum groups all these components into '12 pillars of competitiveness': Institutions, Infra-structure, Health and primary education, Macroeconomic stability, Higher education and training, Goods market efficiency, Labor market efficiency, Financial market sophistication, Technological readiness, Market size, Business sophistication and Innovation.

(l) India is the only country which is factor-driven and the rests are in a better stage of development than India. In

[22]GDP: The gross domestic product (GDP) or gross domestic income (GDI) is a measure of a country's overall official economic output. It is the market value of all final goods and services officially made within the borders of a country in a year. It is often positively correlated with the standard of living though its use as a stand-in for measuring the standard of living has come under increasing criticism and many countries are actively exploring alternative measures to GDP for that purpose.

GDP = private consumption + gross investment + government spending + (exports − imports)

the case of the factors related with efficiency enhancers, India rank is lower than US, UK, Australia and China, but it has scored better than others according to GCI (Table 9). India has also shown increase in scores related with he efficiency enhancers from the year 2008 to 2009, but in higher education and training, the rank and score of India are the lowest; although Australia's rank and score are the highest. Only Brazil has shown improvement in score and in other countries, the score has decreased in 2009 to 2010 in comparison to 2008 to 2009.

(m) India is the lowest in HDI among all the countries. From the year 1975 to 2005, India and China has shown a lot of improvement in the score related with HDI.

(n) Among all the countries, India spent the lowest on education in the year 2005, whereas in the year 2000, China had spent the lowest and India had a better position in spending on education. In the year 1990, 1980 and 1970, India had spent very less percentage of GDP on education, lower than other countries except China. However, China spent the lowest in these years.

(o) Inbound mobility rate is maximum in Australia and minimum in China.

(p) Total enrollment was highest in China in the year 2006. India was on the third position after United States. In the year 1999, GER was highest in United States and India was on the second last position before China. GPI (related with GER) in 1999, was highest in US and lowest in India. In 2006, the GPI (related with GER) was highest in United States and the GPI of India was the lowest in comparison with others. As regards GER in 2006, Indian was on the lowest position and US was on the highest position. Teaching staff in the year 2006 was highest in China and lowest in South-Africa. Nonetheless, India stands on the better position when compared with other countries. So, the overall India's position is poor in the case of GER, teaching Staff; hence, it needs a lot of improvement.

SUGGESTIONS

(a) India has to improve on all factors which affect value of higher education system by setting committees or organizations so that they can keep track and improve on these factors. Thus, the suggestions of these committees and organizations must be implemented.

(b) India has to take better steps to improve gross enrolment ratio by increasing public spending on education.

(c) Government can also work towards provision of free education to all till graduation.

(d) Government must take steps to improve the number of inbound mobile students by increasing the public spending on programmes or participation in international fairs.

Conclusion

Education for all cannot be achieved without improving quality and hence value. In many parts of the world, anenormous gap persists between the numbers of students graduating from school and those among them who master a minimum set of cognitive skills. Any policy aimed at pushing net enrolments towards 100% must also assure decent learning conditions and opportunities. Lessons can be drawn from countries that have successfully addressed this dual challenge. Better education contributes to higher lifetime earnings and more robust national economic growth and help individuals on other matters that are important to their welfare. International achievement tests reveal that socio-economic status has a strong influence on levels of education outcomes.

Two principles characterize most attempts to define quality in education: the first identifies learners' cognitive development as the major explicit objective of all education systems. Accordingly, the success with which systems achieve this is one indicator of their quality. The second emphasizes education's role in promoting values and attitudes of responsible citizenship and in nurturing creative and emotional development. The dual challenge of improving quality and expanding access in an equitable way requires a level of sustained investment that is currently beyond the reach of countries. The achievement of these objectives is more difficult to assess and compare across countries. In low- income countries, the positive impact on quality and hence of education is by increase spending for the provision of more textbooks, reduce class size and improve teacher education and infrastructure facilities on learner's cognitive achievement. In rich countries, the standards are much higher than low-income countries. Improvements in quality can be increased at a very modest cost and are within reach even in the poorest countries.

The education quality stands at the heart of Education for All. It determines how much and how well students learn, and the extent to which their education achieves a range of personal, social and development goals. So, this research paper offers a map for understanding, monitoring and improving quality. Education quality, low or high, is judged by the extent of its objectives that are met. Government committed to improve learning outcomes face difficult choices, but policies exist that are not necessarily beyond the reach of the most resource constrained countries. They start with a focus on the learner and they place emphasis on the dynamics of teaching and learning, supported by a growing body of research on what makes the schools and teachers effective. Links among different parts of the education sector can help improve quality but they are often hidden or ignored by the compartmentalized machinery of government. Successful qualitative reforms require government to play a strong leading role. Although external assistance can boost resource levels and help in managing education system, it cannot make up for the absence of a societal project for educational improvement. Accordingly, the domestic political process is ultimately the guarantor of successful reform. If it favours educational

change, the chances that external assistance will facilitate a move towards higher quality universal education are profoundly better than the case where such political circumstances are absent. Education and society are linked strongly and each influences the other strongly. Education can help to change the society by im-proving and strengthening skills, values, communications, mobility (link with personal opportunity and prosperity), personal prosperity and freedom. So, education usually reflects society rather strongly: the values and attitudes that inform it are those of the society at large (EFA Global monitoring Report, 2005)[23].

The government in India under the leadership of Dr. Manmohan Singh, Prime Minister, and under the supervision of Mr. Sibal, HRD minister, has taken steps to improve the value of higher education, but the steps have to be strictly implemented in all public and private institutes or colleges. The Indian Education System improvement is required at higher education and research institutions of national excellence. At all levels, there is a need to improve both access and excellence. There are fiscal and administrative challenges to be tackled and there are intellectual and leadership issues to be addressed. At the bottom of "knowledge pyramid", the challenge is one of improving access to primary education. At the top of the "pyramid", there is need to make institutions of high education and research to be that of world class. There is a genuine funds constraint in the public sector that is being neutralized only in part by the private sector. Together, the public and private sectors are not able to cope with the demand for higher and professional education. However, there is an additional problem at the top of the pyramid, namely, that of quality. India's Universities and centers of excellence are falling behind the best in the world both in terms of human capital and physical infrastructure.

Public libraries are an extremely important element of the foundation of a knowledge economy. Specialized institutions are equally important in facilitating informed policy-making. NKC suggest ways in which the Central and State Governments can improve rules and regulations and the capacity of policy-making institutions that deal with knowledge institutions. The Knowledge Commission has proposals aimed at improving excellence in research and teaching, especially in the frontier areas of mathematics, science and technology. As such, India cannot afford to lag behind the rest of the world. The leaders of India's national movement are resolutely committed to excellence and to making India a power-house of intellectual endeavour. This is the time to create a second wave of institution building and of excellence in the field of education, research and capability building so that India is better prepared for the 21st century. The Knowledge Commission has come forward with creative ideas to promote the 'knowledge base' of Indian economy and to exploit the vast latent potential. NKC must leverage it to make India truly the 'Knowledge Engine' of the world (Manmohan, 2005)[24]. If these initiatives are successfully implemented, the country will be able to harness the advantage of its demographic dividend and the youth will be able to realize their full potential in the global economy. Further, the massive expansion of educational opportunities will translate into tremendous opportunities for all sections of society including women, children, rural communities, urban slums, tribal groups and other economically and socially disadvantaged communities and help India move towards a more equitable society. Finally, an environment of sustainable growth in the country will be created by key steps such as developing a resource of skilled manpower, a favorable eco-system for entrepreneurship and innovation, R&D, and an efficient system of delivery of public services. The emerging knowledge society and associated opportunities present a set of new imperatives and new challenges for India's economy, polity and society. If these fail to capitalize on the opportunities now, India's demographic dividend could well become a liability. The widening disparities in India will translate into social unrest, if urgent steps are not taken to build an inclusive society. Moreover, India's growth rate, which is faltering now, will stagnate soon, if a sustainable development paradigm is not created.

REFERENCES

Agarwal (2006). "HIGHER EDUCATION IN INDIA- The Need for Change", Working Paper No: 180, Indian Council for Research on International Economic Relation (ICRIER), India.

Agarwal (2007). "Higher Education Services in India and Trade Liberalisation", in Rupa Chanda (Editor), Trade in Services and India Prospects and Strategies.

CABE Committee (2005). Report of the Central Advisory Board of Education (CABE) Committee on Autonomy of Higher Education Institutions. Government of India. June 2005.

EFA Global Monitoring Report (2005). UNESCO.

Global Competitiveness Report (2009-2010). World Economic Forum Global Education Report (2008), UNESCO.

Kapur, Mehta (2004). Indian Higher Education Reform: From Half-Baked Socialism to Half-Baked Capitalism. CID Working Paper No. 108. Harvard University. Center for International Development.

Kirp D (2003). Shakespeare, Einstein and the Buttom Line: The Marketing of Higher Education. Harvard University Press. Cambrige. MA.

Maringe F, Gibbs P (2009). Marketing Higher Education: Theory and Psractice. Open University Press. McGraw-Hill Education. England.

New Knowledge Commission (2008). December Newsletter.

New Knowledge Commission (2009). "Report to the Nation, 2006-2009", Government of India.

New Knowledge Commission (2009). January Newsletter.

Pinto M (1984). Federalism and higher education: The India Experience. Bombay, India, Orient Longman.

Rao (2004). "Education For All". Sonali Publications, New Delhi, pp: 243-244, 255.

Trade Policy Division (2006). "Trade in Education Services, A Consultation Paper on Higher Education in India and GATS: An Opportunity", Department of Commerce, Government of India, India.

UGC (2006-2007). UGC Annual Report, Government of India.

[23] EFA Global Monitoring Report 2006- Education for ALL THE QUALITY IMPERATIVE : Report by UNESCO

[24] Dr. Manmohan Singh has remarked on the launch of the Knowledge Commission

Websites Viewed:

Global Competitiveness Report 2009-2010 http://www.inthekzone.com/pdfs/GCR20092010fullreport.pdf

Human Development Index http://www.photius.com/rankings/human_developement_index_1975-2005.html

Indian Education website: www.indiaedu.com

New Knowledge Commission official website: www.knowldgecommission.gov.in

Ministry of Human Resource Development. www.education.nic.in

UNDP Report. http://hdr.undp.org/hdr2006/statistics/indicators/4.html