

# Developing Education Services in India as a Fulcrum for Creating Niche as Global Academic Hub

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*Education is the backbone of a nation and one of the key indicators of a country's growth and development. An effective higher education sector provides the country with a globally competitive workforce which facilitates economic growth and development. The higher education system in India has grown in a remarkable way, particularly in the post-independence period. Education as a service industry is a part of globalization process and under the umbrella of GATS, which has removed all trade barriers in higher education and makes it a global commodity. The WTO negotiations and commitments made by the government of India in 1995 have had its positive impact on the service sector where India has its core competence. The objective of GATS & WTO negotiations is the expansion and progressive liberalization for that purpose they maintain a multilateral framework of principles and rules for promoting growth of all trading partners including developing countries.*

*It is a fact that increased demand led to the significant changes in supply. The progress of education sector in India is a result of a complex mix of supply side and demand side factors. Today with 250 universities, and approximately 8 million students, India has the world's second largest system of higher education. Emergence of WTO with its four modes of services provides huge opportunities for the growth of education sector. Global trade in higher education is estimated to be more than US\$ 50 billion a year, which reveals that India is still major importer of the services whereas US, UK, Australia, Canada, France and Germany are the major exporter of this service. India is enjoying its competitive leverage on account of the provision of its propitious, exuberant, bonanzic quality and cheap higher education. It is also said that the post liberalization, globalization era has had a major role in the success story of the Indian economy. The booming higher education sector well buffeted by the professional services sector, it is now sanguine enough to maintain and sustain the quality of higher education by providing international presence and global competitiveness.*

*The present paper makes an earnest attempt to analyze the impact of each mode of GATS for the higher education in India emphasizing the comparison of*

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*present scenario with future agenda for global competitiveness. The paper has further discussed the issues regarding whole gamut of aspects of trade in higher education services including its problems, prospects and challenges for traditional institutions by private sector as well as foreign players. In a nutshell, the paper could bring out a set of recommendations, and strategies for enhancing higher education services in India to compete with the global giants in education service sector.*

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**Key Words:** *WTO, GATS, Higher Education, Global Competitiveness*

### **Introduction**

Antecedently, emphasis was inclined towards agriculture and manufacturing sectors, but with the convergence of new technologies they have lost importance in comparison to service sectors. It has been recognized that India is maintaining growth rate more than 9% and is targeting to double this growth rate in future. India is mainly focusing on service sectors for its growth and expansion. Education provides quality manpower which is very essential for global competitiveness. Service sector is the main determinant in the growth of GDP in India. India's recent growth has been led by the export of education services with well buffeted background of huge quality manpower. The growth of service sectors is higher than the growth in agriculture and manufacturing sectors. With the emergence of global business opportunities, service sector has got a gateway to grow at a faster rate than the economy as a whole.

Education plays an eminent role in framing socio-economic setup of any country. Education in India is considered to be a governmental activity, but over the last decade a whole new education industry has grown, alongside the fringes of our formal education system (Banga Rashmi (2006)). The current scenario of university industry interface has changed the formats of tutorials and coaching classes, on-line education programmes, distance education, education consultancies and study programmes in India and abroad. The post WTO-GATS phenomena have encouraged many business organizations to invest in education and conceptualizing to earn profit. India has to be discussed under the challenges and prospects of higher education. The research paper therefore critically examines the global competitiveness of Indian higher education vis-à-vis the General Agreement on Trade and Services (GATS). In order to identify the research gap and to carve out the scope and objectives of the study review of literature is presented in the following paragraph in a compact and significant manner.

### Review of Literature

There are few studies which has been conducted in the area of education especially higher education. The post liberalization, globalization regime has had a significant impact on a wide range of interdisciplinary studies. The prominent studies includes as follows

The study of Satish Y. Deodhar (2001), on GATS and Educational Services: "Issues for India's Response in WTO Negotiations", and Satish Y. Deodhar (2002), "Managing Trade in Educational Services: Issues for India's Response in WTO Negotiations", opine that India's commitment with GATS in education does not bear any fruit but it further points out that without WTO commitment India cannot get the pace of growth which is indirectly beneficial for other nations. The papers and articles of Razib Ahmad (2003) "10 reasons why India should allow FDI in education sector", Jane Knight (2003), "The Observatory on Borderless Higher Education", Jane Knight (2003) "GATS, Trade and Higher Education Perspective 2003-Where are we?", Mrinalini Shah, (2004), "Education Sector, Destination India: A New Trade in WTO Regime", and Samina Rafat and Shikha Sahai (2004) "WTO-GATS Regime and Future of Higher Education in India" all have discussed about globalization of higher education and delocking opportunities for already globalised Indian service sectors. The service sector of India is dependent on India's knowledge resources and that too attained through the organized education system. Another important study of Devesh Kapoor and Pratap Bhanu Mehta (2004), on "Indian Higher Education Reform: From Half - Baked Socialism to Half- Baked Capitalism" points out the limitations of the post liberalization, globalization era of higher education. The study concludes that now India has not made any commitments in any of the GATS negotiations for education.

The paper of Khan AQ, and SM Anas Iqbal, (2005), on "Privatization of Higher Education for Globalization under WTO Regime: A Case of India", has focused on the current statistics of public private investment in higher education and has made a comparison on the enrolment of students in both the pattern and has shown the increasing private participation in higher education than that of public participation. The Government of Australia (2005) "Australia's Competitors in International Education" is an update of governments education services for global competitiveness is an overview that India is the future destination of the Australian education service providers. The report also finds out that India is next generation competitor for Australian higher education services.

Rupa Chanda's, (2004) study on GATS, Higher Education Services in India, and the study of Shashi K Shrivastava, (2006) on Higher Education System

in India: have the same opinion that India has the future in global competitiveness under common platform of GATS. The paper of Sanat Kaul, (2006), on "Higher Education in India: Seizing the Opportunity", points out the factors of the four modes of GATS and its implication for Indian Education Services. The paper further emphasizes on the necessity of negotiation for India and how long it will be beneficial for Indian economy as well. Agarwal's Pawan's (2006) study on higher education in India: the need for change of the higher education in India is a crucial evaluation of the present scenario. It covers all the issues regarding FDI, GATS, WTO and privatization of the sector. The working paper on higher education suggests for further reforms to exploit the market through the advantage of mass potential of knowledge resources and quality manpower.

### **Research Gap and Scope of the Study**

The studies mentioned above have focused on the future benefits of higher education. The studies somewhat having a common opinion that Indian education services should be committed with WTO and most of these issues described its importance theoretically. The analytical framework of higher education services in the present study is a bit different from the past studies.

The important aspects of higher education is being focused in the present study. India is still in a nascent stage in higher education. The study also tries to focus on the future prospects and challenges of higher education for global competitiveness under GATS environment. The present scenario of higher education in India and its implications after international commitments is based on the following objectives.

### **Objectives of the Study**

- To appraise present scenario higher education services in India in post and pre liberalization regime.
- To evaluate the structure of Indian higher education system with special reference to private-public participations.
- To find out government's intervention in facilitation and promotion of the future higher education perspective.
- To analyze the challenges and future opportunities of Indian higher education sector for its strategic management.
- To make a SWOT analysis of the present scenario of Indian higher education for global competitiveness.
- To justify why India need to go globally (i.e; making cross country comparison of the Indian higher education with global standards).

### **Higher Education Services in India: A Bird' Eye View**

Education in India is considered to be a governmental activity, but over the last decade a whole new education industry has grown, alongside the fringes of our formal education system. The current scenario of university-industry has opened many avenues for the students to get higher education through various sources like tuitions, coaching classes, distance education, on-line study programmes, education consultancies for various courses in India and abroad. The WTO-GATS phenomenon have encouraged many entrepreneurs and business houses to invest in education as a result, conceptualizing education services to develop as a profit motive industry has emanated (Satish Y. Deodhar, 2001).

A large share of education expenses are financed by state budgets, most of which are in the form of recurrent expenditures. The Kothari Commission Report (1964) and the NPE (1986) recommended that 6% of GDP should be provided to education. Overall around 3.7% of GDP has been invested in the last couple of years in education sector within which 17% was on elementary education alone. On an average, around 50%-55% of all education spending is on elementary education and around 11%-12% invested in university and higher education. India has not been able to maintain high standards of education especially in knowledge and technology.

The growth of higher education in India has been phenomenal. Starting with 1950-51, there were only 263,000 students in all disciplines in 750 colleges affiliated to 30 universities. This has grown by 2005 to 11 million students in 17,000 Degree colleges affiliated to 230 universities and non-affiliated university-level institutions. In addition, there are about 10 million students in over 6500 vocational institutions. The enrolment is growing at the rate of 5.1 per cent per year. However, of the Degree students only 5 per cent are enrolled into engineering courses, while an overall 20 percent in sciences. The demand for professional courses is growing rapidly (Sanat Kaul, 2006). Over the last decade education is growing towards success. The progress of education sectors in India is improving at a phenomenal rate as a result of a complex mix of supply side and demand side factors. The country has made tremendous progress in improving elementary education provision and increasing participation. Huge opportunities for supply is generating with the increasing demand, besides the periphery of our formal education system. Many business organization have been encouraged to invest in education as there is a need of more and more educational institutions. To make India one of the major knowledge economies in the world in the near future, it is important to continue the current level of focus and commitment, along with the right amount of resources in an improved governance and service delivery framework.

With the increase in educational institutions the need for professionals and experts is increasing but because of inadequate supply higher education services is being commercialized. The higher education services in India have a prospective future in the post liberalization, globalization era. India has growth prosperity where in the total world about 140 million students have enrolled in higher education in which India has a share of 10% of the world and it is expected that in near future there will be a sharp rise in movement of international students across countries. This will provide variegated opportunities in education services especially for trade in higher education services for India and this will help Indian institutions in placing their position without full commitment. (Mrinalini Shah, 2004). The present scenario of Indian higher education is such that it has a standard growth in all the aspects and in the near future it can avail the fruits of liberalization only after making the needful commitments and accepting the approved proposals from the developed countries.

Table 1 and 2 pertaining to the growth of higher education services in India shows rapid growth in Indian higher education institutions and enrolments. Before Independence, the growth rate of educational institutions was very nominal but after 1991, it has grown in a remarkable way. The total institutions and enrolments is expected to reach 20000 and upto 2010 it will reach 24000 with 15 million enrolments as a whole. Both pre and post liberalization regime has a classical view but the growth of post liberalization is more in comparison to pre liberalization in terms of enrolments. Here the problem arises to finance the higher education without effecting the budgets of both central and state governments. Post liberalization, globalization led to the introduction of new and emerging sources of investment. Without making commitments with WTO many domestic and foreign investors have been deep-seated in the structure of higher education. For ensuring quality expertise education within the country it is important to make international co-operation and negotiations.

The present scenario of global competitiveness necessitates analysis and investigation of private commitments in higher education in order to know India's performance against global standards through private and public combination. The maximum opportunities for students for higher education are possible because of the implication of WTO negotiation which assures privatization of the sector and equal opportunity for the public.

In the ancient and medieval period India's position in higher education was incredible. Even then the cultural heritage of ancient Indian education system gained much popularity in the world. After Independence the students from third world nations were dependent on Indian universities due to cheap

and quality education especially from Iraq, Iran and Middle East, North and West Africa and Central Asian countries.

*Table 1. Growth of the recognized Specific Higher Education Institutions (HEIs) in India during Post Liberalization Regime (1990-91 --- 2010\*)*

	Colleges for general education	Growth	Colleges for professional education @	Growth	Universities/ Deemed Univ./Instt. of National Importance	Growth	Total	Total Growth
1990-91	4862	0	886	0	184	0	5932	0
1995-96	6569	7.9	1354	10.1	226	3.2	8149	8.1
2000-01	7929	1.9	2223	4.7	254	4.1	10406	2.5
2001-02	8737	10.2	2409	8.4	272	7.1	11418	9.7
2002-03	9166	4.9	2610	8.3	304	11.8	12080	5.8
2003-04	9427	2.8	2751	5.4	309	1.6	12487	3.4
2004-05	10377	10.1	3201	16.4	407	31.7	13985	12
2010*	15300		4200		500		20000	
<b>Mean</b>	<b>8152.4</b>	<b>5.4</b>	<b>2204.85</b>	<b>7.6</b>	<b>279.43</b>	<b>8.5</b>	<b>10636.7</b>	<b>5.9</b>
<b>CAGR</b>	<b>5.4</b>		<b>9.8</b>		<b>4.3</b>		<b>6.2</b>	
<b>SD</b>	<b>2360.1</b>	<b>2.8</b>	<b>818</b>	<b>7.7</b>	<b>79.4</b>	<b>7.5</b>	<b>3232.1</b>	<b>3</b>
<b>CV%</b>	<b>32.7</b>	<b>53.9</b>	<b>44.1</b>	<b>83.3</b>	<b>31.9</b>	<b>132.9</b>	<b>34.6</b>	<b>51.4</b>

*Source : Reserve Bank of India Handbook of Statistics of Indian Economy (Various Issues from 1991-2010)*

*\*Projected*

It is observed that the foreign students are influenced and attracted towards other developed countries because the post liberalization regime has witnessed sudden increase in the fee structure and other expenses without any infrastructural improvement. Hence, there is a need to improve the infrastructure and quality of educational institutions which is possible through planned funding. The post WTO-GATS regime does not only promote privatization of education but also aims to derive maximum benefit from global educational ambience.

*Table 2. Growth of Total Higher Education and Enrolment in India since Independence (1947-2010\*)*

Year	No. of Institutions	Growth	No. of Students'000'	Growth
1947	616	0	250	0
1950	770	25	333	33.2
1960	2154	179.74	666	100
1970	3700	71.77	2125	219.07
1980	5100	37.84	2750	29.41
1990	6000	17.65	4333	57.57
2000	12750	112.5	8750	101.92
2005	18000	41.18	10420	19.09
<b>2010*</b>	<b>24000</b>	<b>33.33</b>	<b>15000</b>	<b>43.95</b>

*Source: Shashi K. Shrivastava, (2006)*

*\*Projected figures*

### Education Services in Post WTO-GATS Regime

Government of India has made WTO negotiations and commitments in 1995, the purpose of which was to promote overall economic growth including that of developing countries. The WTO-GATS negotiations also maintain a multilateral framework of principles and rules with the objective of expansion and progressive liberalization of trade.

GATS have classified the total services (161) into 12 different sectors and education is one amongst them. Commitments of GATS are flexible in nature i.e; any nation can make commitments in any sector of its own choice that is without any compulsion the nation can make use of their selection criteria where they have their core competitiveness. It enabled the nations to enjoy the benefits of the commitments, striking a balance between commercial interests and regulatory public policy concerns.

Out of the total services the education services have been further divided into five parts as Primary, Secondary, Higher, Adult and other education services. The least committed sector in GATS is the education sector which has only 48 members as on August 2007 whereas in tourism all the member countries are committed and financial and business services obtained maximum weightage. Rapid changes are most apparent in the area of higher education, which normally refers to post-secondary education at sub-degree and university-degree levels. GATS has made clear definitions on the services in four modes, all the four modes are relevant in education services especially in higher education services.



- **Mode 1: Cross Border Delivery:** Mode 1 is already in practice in India without any negotiation. Here the consumers need not to move, the services itself cross the border. It is possible through internet (i.e; on-line courses), distance- education services, tele-system etc. It also comprises sale of paperback editions of books and educational CDs or DVDs.
- **Mode 2: Consumption Abroad:** Under this mode the consumer or student travels to the country where the service is supplied. One glaring instance of this mode is that an Indian student studying abroad at his own expenses. This mode influence development of technology and movement of students across the border for higher education.
- **Mode 3: Commercial Presence:** Under this mode the service provider establishes his commercial presence across the border through appropriate provision such as Franchises, Off Campus, Collaboration, FDIs in Indian institutions etc. Indian has not permitted foreign higher education institutions in India, but in order to compete domestic educational institutions with the foreign one India should allow it. Import- competing institutions should be developed in order to improve campus facilities. With the HRD Ministry contemplating to allow establishing of foreign universities in India we might see campuses of overseas universities flourishing in india
- **Mode 4: Movement of Natural Persons:** This mode refers to the movement of natural persons temporarily across the country for providing educational services, for eg. Foreign faculty and scholars teaching in India or Indian teachers teaching abroad on visiting arrangements. For subsequent negotiations on trade services Indian authorities should put forward their own proposals and select commitments in their best interest instead of accepting proposals and commitments made by other nations. This should generate adequate data related to trade for educational service providers and users. Based on that, government can easily handle various sectors of educational services and can also ensure critical observation on India's competitiveness.

#### **Global Competitiveness in Higher Education: Niche for India**

After 1991, India's knowledge resources have been growing at a faster rate which results in the growth of higher education. Globalization has led higher education to be recognized all over the world. To some extent India has achieved its highest targets but still there is a huge gap to be filled

which are the key indicators of global competitiveness such as R&D, high-tech exports etc.

Here, the need arises to find out such gaps to be filled in order to meet out global standards by framing planned policies. India is still far away from global standards which oblige it to execute planned policies for the development of higher education. Tables and figures indicate that India can compete globally through its structured plans and policies and better utilization of its knowledge resources. The statistics as depicted in the table also emphasizes the comparative analysis of the global competitiveness of higher education with the selected global leaders in this field.

Table 3 represents Country Wise Gross Enrolment in Higher Education after 1991 to 2001 and estimated enrolments of 2011 along with the GNP/Capita US\$. GER of 2001 would increase to 23 in 2011. This shows an emerging trend of Indian higher education services, but in terms of per capita expenditure India is still lagging behind. GER of USA is highest but it does

*Table 3. Selected Country Wise Gross Enrolment in Higher Education and GNP/Capita (Current and Projected up to 2011)*

Country	Enrolment 1991	Enrolment 2001	Estimated Enrolment (current) 2011*	GER	GNP/capita US\$ (current)	Growth (%)	GNP/capita US\$ (2011*)
USA	13.71	15.93	<b>18.51</b>	81	34280	16.19	39829.93
China	3.82	12.14	<b>38.58</b>	13	890	217.8	2828.42
Japan	2.9	3.97	<b>5.43</b>	49	35610	36.9	48750.09
<b>India</b>	<b>4.95</b>	<b>10.58</b>	<b>22.61</b>	<b>11</b>	<b>460</b>	<b>113.74</b>	<b>983.20</b>
UK	1.26	2.24	<b>3.98</b>	64	25120	77.78	44658.34
France	1.7	2.03	<b>2.42</b>	54	22730	19.41	27141.89
Italy	1.45	1.85	<b>2.36</b>	53	19390	27.59	24739.70
Brazil	1.54	3.13	<b>6.36</b>	18	3070	103.25	6239.78
Russia	5.1	8.02	<b>12.61</b>	70	1750	57.25	2751.88
Canada	0.84	1.19	<b>1.69</b>	58	21980	41.67	31139.07
Indonesia	1.59	3.18	<b>6.36</b>	15	690	100	1380.00
Philippines	1.71	2.47	<b>3.57</b>	31	1030	44.44	1487.73
Australia	0.49	0.87	<b>1.54</b>	65	19900	77.55	35332.45
Malaysia	0.12	0.56	<b>2.61</b>	27	3330	366.67	15540.11

*Source: Compiled from UNESCO Statistical Year Book 1998, and Institute of Statistics 2005 in Pawan agarwal (2006)*

*\*Projected*

not have any future potential in comparison to other developing countries like Malaysia, China and India. It is noticeable that other nations such as

Brazil, Australia, Indonesia and UK are growing at the same pattern where UK has already overblown in marketing their higher education sector.

**Table 4. Gross Enrolment Ratio of Top Ten Countries**

Country	2007	2011*
India	13.74	<b>23.70</b>
Australia	75.72	<b>84.55</b>
Canada	53.13	<b>44.12</b>
China	40.55	<b>351.61</b>
France	61.38	<b>90.83</b>
Germany	54.67	<b>74.37</b>
UK	66.35	<b>78.51</b>
USA	95.55	<b>167.81</b>

Source: UNESCO Statistical Year Book 1998, And Institute Of Statistics 2005 in Pawan Agarwal

\*Projected

Table 4 represents Gross Enrolment Ratio of selected countries and India is one amongst the top ten countries. In the post liberalization regime India and China have a growth rate of 114% and 217% respectively, in comparison to other developed countries. China is leading India in the overall growth. It is evident from the table that USA, UK and Australia are the leaders in GER due to their population advantage but India and China are still managing to maintain their growth in GER.

**Table 5. Contribution of Private Sector to the Higher education in selected Countries**

Country	All Higher Education Institutions				Universities			
	No. of Institutions		Enrolment		No. of Institutions		Enrolment	
	Private Total	Year	Private% of Total	Year	Private Total	Year	Private% of Total	Year
Argentina	42.9	2000	25.7	2000	55	2005	14.4	2005
Brazil	88.9	2003	70.8	2003	51.5	2003	56.7	2003
Chile	93.3	2000	71	2000	75	2000	58.9	2000
China	39.1	2002	8.9	2002	0.6	2002		2002
Germany	29.5	2003	3.7	2003	24.8	2003	1	2003
Hungary	54.4	2004	14.2	2004				
Japan	86.3	2000	77.1	2000	73.7	2000	73.3	2000
Kenya	34.2	2000	9.1	2000	70	2000	19.3	2000
Malaysia	92.2	2000	39.1	2000	41.7	2000	7.5	2000
Mexico	69.1	2002	33.1	2002	72.7	2002	41.8	2002

Moldova	44.5	2003	20	2003				
Magnolia	64.2	1999	26	1999	27.2	2003		2003
Philippines	81	2003	76	2003			8.3	
Poland	66.8	2001	29.4	2001	6.3	2000	3.5	2000
Portugal	64.2	2003	28.5	2003	37	2001	19.4	2001
Romania	56	2001	23.3	2001				
Russia	37	2000	12.1	2000				
Thailand	68	2000	19	2000	48.9	2001	16.8	2001
Uruguay	42.9	2004	10	2004	88.9	2000	12	2000
USA	59.4	2000	23.2	2000	74.6	2000	35.3	2000
Venezuela	56.6	2004	41.3	2004	54.2	2004	21.2	2004
<b>India</b>	<b>42.95</b>	<b>2005</b>	<b>30.77</b>	<b>2005</b>	<b>31.01</b>	<b>2005</b>	<b>10</b>	<b>2005</b>

Source: UNESCO Statistical Year Book 1998, And Institute Of Statistics 2005 in Pawan Agarwal

Table 5 represents the contribution of private sector to the higher education in selected nations. It is seen that India is emerging in the scene of global higher education statistics. In the no. of institutions India stands 42% and 30% respectively, which is good but not impressive in comparison to Brazil which stands 88% and 70% respectively. In India the public expenditure for higher education is still taken as a responsibility by the government and not as a segment of innovativeness where concerted efforts are required.

Table 6. Country Wise International PCT Applications Patent International Applications

Country	PPP-GDP 2005	2000	2001	2002	2003	2004	2005	2011*	% Share	% Growth
USA	12278	20.1	38007	43055	41292	41023	43464	45111	<b>53546.8</b>	33.6 18.7
China	9412	15.41	784	1731	1018	1295	1706	2452	<b>7669.9</b>	1.8 212.8
Japan	3911	6.4	9567	11904	14063	17393	20223	25145	<b>66081.1</b>	18.7 162.8
<b>India</b>	<b>3633</b>	<b>5.95</b>	<b>190</b>	<b>295</b>	<b>525</b>	<b>764</b>	<b>723</b>	<b>648</b>	<b>2210.3</b>	<b>0.5 241.1</b>
Germany	2522	4.13	12582	14.31	14326	14682	15235	15870	<b>20012.1</b>	11.8 26.1
UK	1833	3	4795	5482	5376	5205	5041	5115	<b>5457.7</b>	3.8 6.7
France	1830	3	4138	4707	5089	5172	5181	5522	<b>7366.3</b>	4.1 33.4
Italy	1668	2.73	1394	1623	1982	2163	2196	2309	<b>3823.7</b>	1.7 65.6
Brazil	1577	2.58	178	173	201	219	281	283	<b>365.1</b>	0.2 29
Russia	1576	2.58	533	557	539	586	519	500	<b>469.0</b>	0.4 -6.2

Source: Compiled from World Intellectual Property Organization, ([www.wipo.org](http://www.wipo.org))

Table 6 represents country Wise International PCT applications. Application of PCT from India is the major indicator of science and technology education. It has been seen that India's share of contribution towards science and technology through variety of researches is very low. The last five years experienced declining trend in India's PCT applications where the US and Japan are leading India by their fruitful researches. The share of Indian PCTs in the world is only 0.5%. India's growth is 241% which is positive but still needs improvement. India should move ahead to improve scientific researches and technologies, so that it can compete against global standards. The future policies in science and technology should be so framed that it can be used to exploit the issues in the new and emerging spheres of higher education.

Table 7 represents Percentage Share of World Reputed Publications of Major Countries. It shows that India is enjoying special status in its publication sphere but in scientific publication it needs improvement. Indian publication has got a considerable position in the post.

*Table 7. Percentage Share of Well Reputed Publications of Major Countries*

Years	India	Growth %	China	Growth %	S. Korea	Growth %	Brazil	Growth %
1995	1.9	-2.6	1.5	8.6	0.8	50.0	0.8	23.1
2000	1.8	-5.3	3.3	30.0	1.6	10.7	1.3	4.2
2005	2.3	2.0	5.7	12.9	3.1	18.1	1.8	8.9
2011*	4.58	3.96	11.48	25.83	6.13	36.15	3.63	17.89

Source: UNESCO statistics (2006)

\*Projected

Liberalization, globalization era but still India is lagging behind China. In order to meet out higher education standards India should go for global commitments. The statistics regarding global standards of higher education shows that India is growing but share of Indian publications are decreasing.

*Table 8. Science & Technology Indicators on Two Major Developed and Two Fast Growing Economies (2006)*

Key Indicators		USA	JAPAN	CHINA	India
Expenditure on R&D	As percentage of GDP	2.60	3.15	1.31	0.81
	Percentage Performed HEIs	16.8	13.9	10.1	2.9
Research manpower	Researches/million	4484	5287	663	119
	Technicians/million	--	528	--	102
	Rank Growth Competitive Index	2	12	49	50

Patent	PCT application	45111	25145	2452	648
Publications in reputed Journals	No. of papers rank	1	2	9	13
	No. of citations rank	1	4	18	21
High tech Exports	Volume US\$B	216.02	124.04	161.6	2.84
	Payment in US\$B	32	24	30	5
International Std. HEIs	HEIs in Shanghai's Top 500 Universities	161	36	18	3

*Source: Compiled from the reports of MHRD and ICRIER*

Table 8 represents Science and Technology indicators of the major economies of the world. The indicators of science and technology reflect the technological capability of a country. Indian education system needs to keep pace with the Scientific and Technological development for global competitiveness. With the explosive growth of higher education services along with the development of Science and Technology competition has become a hallmark of growth all over the world and further commitments with global leaders can lead to the capitalization of India's key resources.

The major challenge of Indian economy is R&D, where India is still struggling. The developed nations are even spending their huge investments in R&D where India is far behind of them and in comparison with China which is real competitor for is also framing their policies according to the needful research and developments (Agarwal Pawan, 2006). Indian universities are not counted even in 500 best global institutions and there are only 3 Indian institutions in Shanghai's index which lies at 250-300<sup>th</sup> position. India is considered as one of the weak nation in high-tech export where China and other developed countries are excelling in this aspect.

India's patent rights are only 648 where US had more than 45000. It shows that India is far behind US and it cannot excel with the existing level of standards. India has got expertise in publication and in order to get the desired proficiency in publication it is necessary to find out new and emerging sources, which is not possible without further commitments with GATS. India has to utilize the capitalization of resources in an effective manner so that it can fetch growth in higher education and can go for global competitiveness.

### **Prospects and Challenges of Indian Higher Education under GATS**

India's exuberant knowledge provide future benefits to service sector as well as education sector, which provides real strength to Indian IT and ITES companies. Today India has the world's third largest number of technically

and professionally trained manpower. Professionalists and Technologists educated in India are in demand all over the world which is the key resource for global competitiveness in all the aspects of growth measures.

“India’s higher education policy of the 1950s, which envisaged schools of excellence, especially in technology and sciences, has finally paid off rich dividends. The creation of IITs, IIMs, Schools of Science, Schools of Law, a large number of advanced training and research institutions have now been well and widely accepted. Doctors trained in India have been the backbone of the British Medical Service for many decades. Indian scientists have found positions of importance in research laboratories of the US and other developed countries. But it was the IIT engineers who have finally struck gold during the dot.com boom of the 1990s and brought laurels and bore testimony to Indian competence abroad. Of about 140,000 graduates of IIT so far, roughly 40,000 have gone to the US. They have been given the credit of creating 150,000 jobs and \$80 billion in market capitalization. It is said that when a new IT company is launched, investors inquire if there is an Indian in it. Further, 55 US Members of the House of Representatives co-sponsored Resolution 227 honouring the economic innovation attributable to graduates of the Indian Institute of Technology” (Sanat Kaul, 2006).

India is rich in off-shoring knowledge and manufacturing sectors. Indian manufacturing sectors can become competitive in specific areas through skill upgradation. Technological changes provide India a unique opportunity to mobilize its human resources. Mobility of skilled work and workers and opportunities in IT/ITES sector (require 8.8 million people-direct/indirect by 2010) are very important for the growth of service sectors.

On the basis of the opinion of WTO and GATS commitments the standard of the rich and poor for availing higher education services are to be compared. In the new global realities of competition the objective of commitments should be emphasized to provide higher education to the poors through scholarships on merit basis in order to bridge the gap.

India looks to liberalize trade in educational services and proffer precise commitments in its proposal for dialogue. Indians must understand that they are not trading-off their privileges and pedals on concerns that are essential to their nationhood, cultural philosophy and protection. There are many exemptions and preserves allowed in GATS which can be successfully utilized to protect Indian interests. Article II.1 initiates the Most Favored Nation (MFN) clause by mentioning that a country will truce another member country treatment which is no less constructive than that it accords to any other country. However in the same breadth, Article II.2 allows countries to negotiate exemption from this commitment and those exemptions must be mentioned in the schedule of commitments made. For example, India can give special treatment to students

of SAARC and NAM countries without giving the same special treatment to others, provided this is mentioned in the commitment schedules. Article XII.1 allows countries to take measures to control the balance of payments problems (BOP). This may include restrictions on transfer of payments and foreign exchange until the BOP situation improves. India does not face BOP problem at this time. However, if it does in the future, India can exercise the option of restricting trade in educational services to prevent flight of foreign exchange from the country. Moreover Article XIV allows measures to protect public morals, maintain public order and national security, and prevent fraudulent practices. For example if Indian authorities believe that some of the educational material coming into the country is not according to the morals and values of this land, restrictions may be imposed to protect public morals. In fact, Article X even provided for emergency safeguard measures as well (Sanat Kaul, 2006).

### **Suggestions and Conclusions**

India should endorse the US view of including educational testing services to be included in the country commitments. However India should press for phased liberalization in order to suit its needs. A lead-time of almost one decade is necessary to upgrade our testing services to compete effectively with foreign suppliers in the domestic market, and gather market intelligence to focus an adaptation of our services for the export market. India may commit to all modes of trade in higher education as well (Joshi M. M. 1998). India should carve out niche market for its knowledge programmes. In order to compete with foreign institutions based in India, the infrastructure of our import competing institutions should be upgraded. Almost one decade time period is required to to upgrade our priority institutions in terms of infrastructure and facilities. Such is the gestation period estimated due to the poor state of present facilities

Globalisation has its positive impact on the national higher education institutions. It leads higher education towards international involvement. The focus of Indian education sector has been shifted from the public sector to the private sector. Education has a huge global market in which students, teachers, non-teaching employees constitute resources for profit generation.

India may negotiate with other countries for their commercial presence in secondary education. Private high schools of CBSE standard have got recognition to be exported worldwide, and nearly more than 100 already exists in other countries. Similarly, US schools exist in India and elsewhere that are primarily meant for non-resident US citizens. The global trade professional services are increasing rapidly, so India should propose for a specific commitment on export of professional services under the trade mode- 'movement of natural



persons'. This is essential for the global recognition of academic and professional qualifications.

Indian authorities must request for assistance from UNESCO and/or other world bodies for improving educational infrastructure in the country. This has been done in other WTO agreements such as Agreement on sanitary and phytosanitary measures (SPS) and Agreement on Technical Barriers to Trade (TBT). Moreover such assistance must be provided in a structured, time-bound fashion. The motivation for such request is that developing countries such as India will find it extremely difficult to cope-up with abrupt issues that will arise if commitments were to be adhered-to immediately after an agreement is reached. To compete actively with developed nations, to upgrade our facilities and infrastructural needs, developing countries must have conversion time of almost one decade, in which complete implementation of the agreement can be undertaken (NIEPA 2001).

India should make necessary changes in the existing system so that Indian higher education system can face the onslaught of global challenges. Authorities must develop a database of information on all categories of education regarding number of educational institutions, their enrolments (domestic & foreign), faculty strength, financial sources and quality and accreditations.

Further, market intelligence regarding situation in other countries be sought through our diplomatic attaché in the Indian embassies abroad. Existing reputed educational testing services will have to be modernized. To compete with testing services such as say, GRE, GMAT, and TOEFL, our reputed testing services such as CAT, MAT, IIT-JEE and others must be upgraded and modernized. A committee must be constituted to suggest upgradations and implementation of the suggested upgradation. The upgradation will be in terms of year round availability of the testing service, computer-aided and internet-based testing, and universal acceptability of the tests by various academic institutions including foreign institutions. Moreover, assessment will have to be done whether or not private providers can take on the mantle of running such services for its efficient functioning (Khadria, B. 1999).

Out of the 12 counts of General Agreement on Trade in Services, education is the most important one which is a boon for India as it has vast resources of knowledge and human capital but unfortunately education services is the least committed count under GATS. In India without making further commitments to GATS all the four modes are in practice. If India is accepting them formally it may be more beneficial where India's real challenges can be converted into opportunities. There is a wide scope for further development in desired manner. Wherever the country is strong it can be marketed in cost effective manner. High quality with low cost is the strength of India's competent sectors, then why it can't be in education services especially in higher education.

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