

CHAPTER 4

JOURNEY OF HIGHER EDUCATION IN BIHAR

Before embarking on analyzing the current situation, it is imperative to look into the trends of progress made in the past in the realm of higher education system in Bihar. The present chapter briefly discusses the situation of higher education system during different periods and examines the current scenario as well as the recent initiatives undertaken in this sector.

4.1 The development of Education in Bihar during the Ancient Period

Eastern India, particularly Bihar, has a long history of organized education & learning. From the beginning of cultured human society this region had played very significant role in making people educated and civilized. During the Vedic period, Mithila, a place in Bihar, was renowned for its Vedic education and scholars. Parallel with the traditional Vedic education the Buddhist and Jainist education sprouted first in the State during the 5th Century B.C. These educational systems were not confined to religious and spiritual themes but opened the door of education to masses. During the time of Ashoka, there were evidences of widespread practice of education in the Magadh Empire. The emperor's message engraved in the four Ashoka Pillars, confirms that majority of the population was literate. Three world class universities namely Nalanda, Vikramshila and Udantpuri were established between the 4th and 8th Century in Bihar. Nalanda was established as a Buddhist monastery probably during the reign of Kumara Gupta I. It has the distinction of being the first international university of world which produced many great scholars including Aryabhata and

Varahmihira. Both the Universities of Vikramshila and Udantpuri were established by the Pala dynasty king Dharam Pala. These Universities attracted large number of students and scholars from all over the world and helped to spread Indian culture in foreign countries such as Tibet, China, and Central Asia and also in South East Asian countries. The ancient language Pali had flourished in Bihar. The existence of these institutions during the ancient period highlights the rich and great cultural heritage of the state.

4.2 Education in Bihar during 17th Century

Till the early Seventeenth century, four types of educational institutions existed in Bihar: the Sanskrit Chatuspadi and Madarsas, for higher education and Pathashalas and Maktabas for elementary education. These institutions for higher learning were generally established at the initiative of an eminent person or a group of such persons. They used to get grants from the local King or his agent or from the rich families of the village for meeting their day-to-day expenses. Francis Buchanan during his survey of Bihar between 1809 and 1813 also mentioned that “The Darbhanga Raja, being himself a Brahmin of very high birth, pays some attention to the education of the Pandits in his estates.” There were specialized institutions for Sanskrit education and different branches of Sanskrit learning like poetry, grammar, astronomy etc. were imparted. Sanskrit learning was popular even among some contemporary Europeans during that period. Along with Sanskrit, education in Persian was also very popular, particularly among Muslims. As Persian was used as official language during that period, many Hindus had also learned the subject with great zeal. The reputation of this region for Persian education was so high that many scholars well versed in this language came and settled down here. In one of

survey reports of W. Adams conducted during 1837-38 it was mentioned that education system in the State was highly developed and widespread with at least one school in each village. The curriculum and course structure were very advanced and libraries were normally equipped with books and manuscripts on related languages and disciplines.

4.3 Education during British Rule

Initially, Britishers were not much interested in the education system of the country. But, with the passage of time, their attraction towards the rich and traditional knowledge base started. Subsequently, they started interfering in the system to serve their self-interest. A radical change was introduced in 1835 with the introduction of Macaulay's Minutes on Education. The Minute has directly impacted the content, methodology and medium of Indian Educational system. The Governor General Lord William Bentinck had accepted and approved this resolution which adversely impacted the traditional education system in the country. However, as the number of English schools and colleges were very few in Bihar, this region remained relatively less affected. Another landmark development in the history of education in India was introduction of Wood's dispatch in 1854. The sole purpose of all these initiatives was to spread the knowledge of English, science and other European languages. One of the most important recommendations of the Wood's dispatch was the establishment of a university in each of the presidency Calcutta, Bombay and Madras. The first university of India was established in Calcutta in 1857. As Bihar was part of the Calcutta University, it was decided to open a college at Patna. As a result, Patna College was established on 9th January 1863. The first batch of students took their degrees in 1868. From 1863 to 1917 the college was

affiliated to the University of Calcutta. After Patna College, it was decided to establish a separate college for professional education. In 1886, a survey training school was established which was transformed into Bihar School of Engineering in 1900. The year 1917 was a landmark in the history of higher education in Bihar. The much awaited Patna University was established in October, 1917. Between 1917 and 1940, series of institutions were established to spread the knowledge of both professional and general education. The graduate level curriculum was introduced in the Bihar School of Engineering during 1927 and the School was further renamed as Bihar College of Engineering in 1932. For spreading the science education in the region, science department of Patna College was started in 1927. It was further established as a separate college in the name of Patna Science College in 1928 by the then Viceroy Lord Irwin. In 1940, the first college exclusively for women in Bihar, Patna Women's College, was established.

4.4 Education during the first five decades after Independence

Until Independence, this region remained the hub of education and research. People used to come and study in Bihar based institutions from different parts of India and abroad. Patna University was called as 'Oxford of the East'. Bihar's administration and university education system was assessed as the best in the country by the renowned expert of Public Administration, Sir Paul Appleby. During 1950s he visited several states in India and asserts that "Bihar is the best administered state in India and in the time to come it will become an example for other states". This period saw the establishment of good academic institutions and big industrial projects such as the Bokaro Steel Plant, Heavy Engineering Corporation (HEC) at Ranchi, and a petroleum refinery and a fertiliser unit at Barauni. The reorganization of

University system in the State immediately after independence was proving to be turning point in the expansion of higher education. On January 2, 1952 Patna University was converted into a purely teaching cum-residential University with the territorial jurisdiction over Metropolitan Patna. The Patna University Act 1917 was replaced by the new 1951 Act which not only restricted governmental interference in the routine affairs of the University but also facilitated their smooth functioning. Such provisions produced positive results and the Institutions acquired high reputation within and outside the country during the 1950s and early 60s.

However, the situation started changing alarmingly by the end of 60s and early 70s when the Universities became the target of political parties. The year 1967 was significant in the political history of Bihar when a non-Congress government came into power. The political development in and around the State virtually paralyzed the higher educational institutions. There was deep discontent among people because of unequal distribution of land, steep rise in prices of essential commodities and high unemployment rate. Number of Students Union joined together to stage the series of mass demonstration. Students started boycotting classes and left their studies to work for raising the consciousness of the people. This movement grew rapidly and led to turmoil in the campus life and classroom teaching came to an abrupt halt. All across Bihar there were clashes between students seeking to shut down schools and colleges. Teachers also started involving full time in the politics, giving relatively lesser or no time on teaching. The agitation spread out to other states creating chaos which forced Central government to impose Emergency rule in the country. This whole movement left a deep impact on the entire education system in the State and portrayed a very gloomy picture of the Bihar. The quality of teaching deteriorated drastically

throughout the state. Malpractices such as mass copying became the order of the day in the 1970s. Instead of good marks and relevant qualifications, bribes and recommendations became the popular practices to get admitted into colleges. In short, the whole education system was completely drenched in corruption and politics.

After Emergency, series of puppet government came to power having lack of vision and apathy towards the development of the State. Till mid-seventies, charity and endowment played a major role in the growth of higher education. There were only 29 constituent colleges belonging to six universities in the state till 1975. The government departments like Education, Public Work and Finance used to take care for the development of these colleges. Majority of the colleges, private in nature, were then nursed by charitable and benevolent families mostly of zamindars and big business houses, public men and lawyers through managing committees. The universities were left free to frame academic policy and syllabus and to conduct the examinations (Mishra, 2011). In 1976, the then Chief Minister started the game of mass conversion of affiliated colleges into constituent units of Universities. The game continued for around ten years which has considerably increased the financial liabilities of universities. This large scale conversion has adversely affected the growth and development of colleges. Moreover, the quantum of public donations has reduced with the increasing interference of government in academic activities. During 1980s, various provisions were enacted to curb the Universities autonomy. Number of 'unaided colleges' were started without due consideration of academic needs. A large number of engineering, management, and degree colleges were opened with no specific regulations. Substandard caste based colleges grown rapidly without adequate infrastructure. These colleges enjoyed total

independence in enrolling any number of students and employ any number of teachers. The teachers were normally unqualified and appointed on the basis of caste, money and personal contacts. The standard of college education deteriorated rapidly. With no academic calendar and willingness to provide a degree for a price, these colleges spoiled the educational reputation and credibility outside the state. Government colleges were also in a pathetic state, almost always behind schedule, leading to various problems for students. Government colleges schedule were normally at least four to five years behind their batch mates outside the state. Hence, student preferred private colleges, where irrespective of attending classes, a degree was assured.

The situation further worsened with the change of the government in the State during 1990. State experienced bad governance and total anarchy with no or little reforms to change the situation for the good. The deliberate policy of the government was to keep the masses uneducated, which suits their political interests. Politicization and criminalization of the campus further aggravated the condition. All political parties view the campus as a recruiting ground, resulting in increased violence and declining standards. The academic calendar was being influenced by the political people who had nexus with the teaching and non-teaching staff. Besides politicization and criminalization, the campuses were also divided along caste lines. The entire educational system left negative impact and led students to become part of a corrupt society. All these changes made Bihar 'pitifully poor state'. Its present condition was contrasted with the heavenly days of yore, when Bihar had produced the Buddha, the Kautilya, the emperor Ashoka and the great Mauryan Empire. Nowadays, Bihar manages to hit the headlines of the newspaper either for devastating floods and famines or caste based

massacre and law and order problems. The journey of higher education in Bihar starting from ancient period till 1990s can be summarized as follows:

Table 4.1
Journey of Higher Education in Bihar

Period	Features
Ancient Period	Mithila, Nalanda, Vikramshila, Udantpuri, Buddhism, Jainism.
17 th Century	Chatushpadi – for Sanskrit education and Madarsas- for Persian and Urdu. Highly developed education system with at least one school in each village.
During British Rule	Establishment of Patna College in 1863 under University of Calcutta. Survey Training School - 1886 Bihar School of Engineering - 1900 Patna University – 1917 Patna Science College – 1928 Patna Women’s College – 1940
1950-1970	Renowned for its higher educational institutions. Greater flexibility and autonomy to higher educational institutions through new Patna University Act, 1951.
1970- 2000	1970s: Adverse effect on higher education due to several political movements. 1980s: Regularization of sub standard and caste based colleges, Unaided colleges irrespective of academic needs were established, Curbing of University Autonomy with new provisions. 1990s: Politicization and criminalization of the campus.

4.5 Current Scenario

The importance of higher education in contributing towards the development of human potential is well accepted, both at the national level and in Bihar.

However, the educational scenario in the state is very dismal. Bihar has lost its pre-eminent position and higher education is almost stagnant in the State. The progress of higher education in any country is assessed in terms of its institutional capacity. The educational institutional capacity is measured by the number of educational institutions viz. universities, and colleges, number of teachers and number of students seeking higher education. Even a casual look at these important indicators brings out the fact that higher education has remained away from the priorities of the state. The current status of higher education in the state is characterized by low enrolment particularly among girls, low completion rate and poor qualitative as well as quantitative infrastructure. Bihar's rank is the lowest amongst major states in terms of Education Development Index, College-Population Index for professional education (0.4, 2001-02), Gross Enrollment ratio (11.00, 2009-10) and Gender Parity Index (0.53, 2009-10) in higher education. The women enrollment in terms of percentage to total enrollment is amongst the lowest in the State (31.25 per cent, 2009-10). The poor educational output at the basic level is the clear reflection of poor delivery of educational services. There are also large disparities in terms of distribution of colleges, enrollment rates and availability of academic as well as physical infrastructure. In this context, it is crucial to know the current status and the growth trends of higher educational institutions in the state relative to other states in country.

4.5.1 Growth in Institutional Capacity

Physical access to higher education is an important indicator which can be examined by considering total number of colleges present and also the growth trends of higher educational institutions. The higher education in the

country as well as in Bihar has witnessed many fold increase in terms of institutional capacity since independence. During 1955-56 to 2009-10, the number of universities in India has registered an increase from 33 in 1955-56 to 409 in 2009-10. Similarly, during the period, colleges for general education, has also witnessed approximately 18 fold increase, from merely 773 in 1955-56 to 14,146 in 2009-10. The period has also witnessed a massive expansion in enrolment across the country. The enrolment in higher education has increased from 7.5 million in 1955-56 to 172.9 million in 2009-10. Same trend was seen in Bihar in terms of progress in higher educational institutions. However, the rate of growth remained relatively low and the state has witnessed a lopsided development in case of colleges for higher and professional education. Universities in the state has increased from 2 to 18, colleges for general education from 50 to 817 and number of students enrolled for higher education from merely 59,314 to 9,47,959. Though the number of teachers in higher educational institutions has increased from 2,595 to 24,099, but the pupil-teacher ratio has shown a poor trends. The ratio has increased from 23 to 39 during the same period.

Table 4.2
Growth of Higher Education System in India and Bihar

<i>Institutional Capacity Indicator</i>	<i>1955-56</i>		<i>2009-10</i>	
	<i>India</i>	<i>Bihar</i>	<i>India</i>	<i>Bihar</i>
Universities	33	2	409	18
Colleges for General Education	773	50	14,146	817
Number of students Enrolled*	749,846	59,314	17,295,086	947,959
Number of Teachers	42,170	2,595	652,665	24,099
Pupil-Teacher Ratio	18	23	24	39

Source: Various Reports, Ministry of Human Resource Development, Government of India

Note: * Excluding Enrolment in Open Universities

Expansion, inclusion, and rapid improvement in quality throughout the higher and technical education system by enhancing public spending, encouraging private initiatives, and initiating the long overdue major institutional and policy reforms forms the core of the government policies in India (UGC, 2008). The state wise distribution and growth of colleges (**Table 4.3**) during the last 55 years has clearly revealed that the distribution and growth of institutions across states in the country is far from uniform. Comparative picture of these institutions during the year 1955-56, 1970-71 and 2009-10 have shown massive expansion of institutions for higher education across all states. However, this expansion is biased towards colleges for general education and professional colleges have shown relatively lesser growth during the period. During 1955-56, number of colleges for general education was 53 in Andhra Pradesh, 55 in Bihar, 42 in Kerala, 14 in Odisha, 79 in Punjab and 70 in Uttar Pradesh. During 2009-10, the number of colleges in these states has increased to 1970, 817, 192, 634, 234 and 2,361 respectively. As regard to growth of professional colleges is concerned, states like Andhra Pradesh, Madhya Pradesh, Uttar Pradesh and West Bengal has witnessed sustainable growth during the period 1956-57 to 2009-10. In Andhra Pradesh, number of colleges for professional education has increased from 23 in the year 1956-57 to 2,503 in 2009-10. Similarly, in Punjab, Rajasthan and Uttar Pradesh number of colleges for imparting professional education has increased substantially (from 30 to 344, from 15 to 475 and from 44 to 743 respectively) during the period. Contrary to this trend, Bihar has witnessed a very marginal increase in the number of colleges for professional education, from 27 in 1956-57 to 214 in 2009-10. Although, the growth was quite impressive during the first

20 years of independence, but later on after 1970s it has shown a sluggish growth as compared to other states of the country (Table 4.3).

Table 4.3
Growth of Colleges in Selected States

States	Colleges for General Education			Colleges for Professional Education		
	1956-57	1970-71	2009-10	1956-57	1970-71	2009-10
Andhra Pradesh	53	343	1970	23	137	2503
Bihar	55	198	817	27	174	214
Kerala	42	120	192	14	156	256
Madhya Pradesh	61	197*	896	26	117	415
Odisha	14	81	634	6	55	240
Punjab	79	121*	234	30	83	344
Rajasthan	54	84*	1135	15	71	475
Uttar Pradesh	70	247*	2361	44	331	743
West Bengal	103	194*	434	32	170	407
India	773	2598	14146	399	2398	11617

Source: Various Reports, Ministry of Human Resource Development, Government of India

* Only degree colleges.

It is evident from above analysis that, all types of institutions have witnessed manifold increase in states like Andhra Pradesh, Kerala, Punjab, Rajasthan and Uttar Pradesh. Considering the importance of technical education for human capital formation, it is imperative to have a deeper analysis of the growth pattern of some of the professional institutions across states. It has been observed that during 1955-56, number of engineering colleges was only four in Andhra Pradesh, one in Kerala, three in Punjab, two each in Rajasthan and Uttar Pradesh. During 2009-10, the number has increased to 698, 98, 82, 96 and 212 respectively. Similar trend has been observed in these states in case of colleges for medical, agriculture, teacher training and polytechnic education during the period. Contrasting to the objective of expansion, the growth of all types of institutions in Bihar is

either marginal or stagnant during the period under study. During 1955-56 to 2009-10, the number of agriculture college has increased from merely two to three, engineering colleges from five to ten, medical colleges from 7 to 37, colleges for teacher training from 5 to 33 and polytechnic institutions has increased from 3 to 17. There are comparatively fewer institutions offering technical education in the State. The lack of facility for providing technical education can be a major reason for the backwardness of the State. This also leads to discontent among the students in particular and society at large (Table 4.4).

Table 4.4
Growth of Professional Colleges (Degree & above standard) in Selected States

<i>States</i>	<i>Engineering</i>			<i>Medical</i>			<i>Teacher Training</i>		
	<i>1956-57</i>	<i>1970-71</i>	<i>2009-10</i>	<i>1956-57</i>	<i>1970-71</i>	<i>2009-10</i>	<i>1956-57</i>	<i>1970-71</i>	<i>2009-10</i>
Andhra Pradesh	4	9	698	6	13	415	7	14	615
Bihar	5	6	10	7	17	37	5	8	33
Kerala	1	6	98	2	5	125	5	18	21
Punjab	3	2	82	5	6	37	15	17	48
Rajasthan	2	2	96	6	11	54	3	19	111
Uttar Pradesh	2	4	212	13	17	104	21	10	128
India	47	107	2,894	99	179	2,074	133	274	3,357

Source: Various Reports, Ministry of Human Resource Development, Govt. of India.

4.5.2 Distribution of Universities and University level Institutions

Although the structure of university level institutions is equally wide in India, but their distribution is highly unequal across states. On one hand, there are seven states, which have only one university, three states have two each, while on the other hand there are seven states which have 21 or more university-level institutions. During 2009-10, there are 40 central universities, with equally uneven distribution. There are two states Delhi

and Uttar Pradesh, which have four central universities. Skewed distribution has also been seen in case of state universities. States like Haryana, Kerala, Orissa, Punjab, Bihar, Madhya Pradesh and Rajasthan have established a large number of universities. There are 105 deemed university in the country; Tamil Nadu tops the list with 21 deemed university. There are five institutes in the country which are established under state legislature act and 41 institutions come under the category of institute for national importance. Like other states, distribution of universities is equally wide in Bihar. In the year 2009, out of 18 Universities, there is 1 central university, 13 state university, 1 private university, 2 deemed to be university and 1 institution established under State legislature Act. Apart from that there are 2 institutes of national importance (**Table 4.5**).

Table 4.5
State-wise Number of University & University Level Institutions

<i>State</i>	<i>Central Univ.</i>	<i>State Univ.</i>	<i>Private Univ.</i>	<i>Deemed Univ.</i>	<i>Insti. Estd. under State legislature Act</i>	<i>Insti. of National Importance</i>	<i>Total</i>
Andhra Pradesh	3	20	0	4	2	2	31
Bihar	1	13	1	2	1	2	20
Gujarat	1	16	5	2	0	2	26
Karnataka	1	16	0	11	0	1	29
Kerala	1	7	0	1	0	2	11
Madhya Pradesh	2	15	0	2	0	2	21
Maharashtra	1	19	0	20	0	2	42
Odisha	1	10	0	2	0	2	15
Punjab	1	7	1	2	0	3	14
Rajasthan	1	14	0	7	0	2	24

Tamil Nadu	1	18	0	21	0	3	43
Uttar Pradesh	4	19	2	8	1	2	36
West Bengal	1	15	0	1	0	3	20
India	40	227	18	105	5	41	436

Source: Statistics of Higher & Technical Education, 2009-10, Ministry of Human Resource Development, Govt. of India

4.5.3 Disciplinary Orientation of Colleges

Recognizing the changing context of the scientific enterprise, and to meet present national needs in the new era of globalization it is necessary to impart technical education qualitatively and quantitatively. Bihar shares 8 per cent of total population of the country but it shares only about 0.35 per cent of engineering colleges, 1.78 per cent of medical colleges, 0.89 per cent of polytechnics and 0.8 per cent of management colleges of the country. There are only 37 medical colleges and 10 engineering colleges in the State. The corresponding figures for Andhra Pradesh are 415 and 698, for Tamil Nadu 198 and 440, for Karnataka 423 and 174 and for Maharashtra 141 and 312 respectively. At present, there are only 17 polytechnics in the state which is extremely low as compared to other states like Uttar Pradesh (163), Karnataka (273), Tamil Nadu (363) and Maharashtra (227). There is huge shortfall in the number of colleges for IT education. Disciplinary orientation of colleges shows that during 2009-10, 817 colleges are multidisciplinary in nature, 10 are for engineering and related education, 37 are for medical, 33 for teacher training and 134 other institutes which includes institutions for law, agriculture management studies, etc. This implies that general education in the State has been accorded more importance than professional and technical education (**Table 4.6**).

Table 4.6
State-wise Number of Colleges and Disciplinary Orientation

<i>State</i>	<i>General Education</i>	<i>Engineering</i>	<i>Medical</i>	<i>Teacher Training</i>	<i>Others</i>	<i>Total Colleges</i>	<i>Polytechnics</i>
Andhra Pradesh	1,970	698	415	615	775	4,473	213
Bihar	817	10	37	33	134	1,031	17
Gujarat	577	29	114	254	244	1,218	104
Karnataka	369	174	423	0	13	979	273
Kerala	192	98	125	21	12	448	59
Madhya Pradesh	896	208	102	102	3	1,311	49
Maharashtra	2,074	312	141	471	448	3,446	227
Odisha	634	82	69	14	75	874	24
Punjab	234	82	37	48	177	578	89
Rajasthan	1,135	96	54	111	214	1,610	71
Tamil Nadu	589	440	198	645	64	1,936	363
Uttar Pradesh	2,361	212	104	128	299	3,104	163
West Bengal	434	73	51	103	180	841	57
India	14,321	2,894	2,074	3,357	3,292	25,938	1,914

Source: Statistics of Higher & Technical Education, 2009-10, Ministry of Human Resource Development, Govt. of India

The current economic super powers are synonymous with the advanced and developed service economy. In current globalized era, demand for managers is increasing to support the growth of a company and the whole economy. There is severe lack of skilled manpower due to absence of management schools in the state. This absence of professional colleges is also affecting the entrepreneurial ability of the State. According to the Report of the working group on Management Education, there are over 1,700 business schools in the country. During 2006-07, the number of management schools in Andhra Pradesh, Kerala, Maharashtra and Orissa were 239, 247, 202 and 247 respectively. However, number of management

schools in Bihar is only 14, which is 0.8 per cent of the total B-schools in the country. The situation of its neighboring state Uttar Pradesh, with 181 management schools, is also reasonably good.

Table 4.7
State-wise Number of Management Colleges, 2006

<i>State</i>	<i>Number of Colleges</i>	<i>Percentage</i>
Andhra Pradesh	239	13.6
Bihar	14	0.8
Gujarat	50	2.8
Karnataka	116	6.6
Kerala	247	14.0
Madhya Pradesh	51	2.9
Maharashtra	202	11.5
Odisha	247	14.0
Punjab	25	1.4
Rajasthan	56	3.2
Tamil Nadu	139	7.9
Uttar Pradesh	181	10.3
West Bengal	47	2.7
India	1,761	100.0

Source: Report of the Working Group on Management Education, National Knowledge Commission.

4.5.4 Number of colleges per lakh population

The data clearly reveals the backwardness of Bihar in terms of number of educational institutions particularly institutions offering professional courses. Considering the unprecedented impact of professional education on economic growth and social development, it is pertinent to have a deeper analysis of the situation. The availability of educational institutions can also

be measured by college population index (C-PI) which measures the number of colleges per lakh population in the age group 18-23. Higher C-PI means more number of colleges available per lakh population, which clearly indicates greater accessibility of higher educational institutions in that particular area. According to a study conducted by UGC the C-PI for India as a whole stood at 12.4 per lakh population in 2001-02, the C-PI for general education in the country was 8.1, professional education is 2.2 and for technical, medical and others it was 0.9 per lakh population. States like Karnataka, Andhra Pradesh, Goa, Maharashtra, Madhya Pradesh, Uttarakhand and some of the North Eastern States have C-PI higher than the national average. The number of professional colleges was higher in Jammu & Kashmir, Maharashtra, Karnataka, Andhra Pradesh and Goa. Andhra Pradesh has highest College Population Index for technical education also. Bihar is much below the national figure and also amongst major states for each category of institution. The C-PI for all types of colleges in Bihar is only 7.2, which is among the lowest in the country. The situation is more alarming with regard to the discipline-wise break-up of institution. There are only 5.5 colleges per lakh population for general education, 0.4 colleges per lakh population for professional education, 0.4 colleges per lakh population for medical education and only 0.1 colleges per lakh population for both technical and agricultural education. Moreover, C-PI exclusively for women's student is only 2.1 as compared to the national average of 3.3 **(Table 4.8).**

Table 4.8
College Population Index by Types of Educational Institutions, 2002

<i>State</i>	<i>General (Multi-disciplinary) Colleges</i>	<i>Professional Colleges</i>	<i>Agricultural & Vet.</i>	<i>Technical</i>	<i>Medical</i>	<i>All Colleges</i>	<i>Women's Colleges</i>
India	8.1	2.2	0.1	0.9	0.9	12.4	3.3
Andhra Pradesh	12.3	3.5	0.2	2.6	1.1	15.9	4.4
Bihar	5.5	0.4	0.1	0.1	0.4	7.2	2.1
Gujarat	6.8	2.9	0.2	0.4	1.0	12.0	2.8
Karnataka	14.4	4.7	0.2	1.3	4.6	21.5	5.2
Kerala	6.5	2.2	0.1	1.4	0.6	9.4	1.8
Madhya Pradesh	10.4	2.2	0.0	0.7	0.6	18.5	2.8
Maharashtra	11.0	5.4	0.1	1.5	0.6	19.2	2.7
Odisha	13.7	1.4	0.1	0.5	0.5	17.6	3.7
Punjab	6.8	1.7	0.1	0.7	1.2	10.7	6.4
Rajasthan	5.3	1.3	0.1	0.3	0.4	8.0	4.0
Tamil Nadu	6.1	1.1	0.2	1.9	2.3	11.6	4.0
Uttar Pradesh	5.0	1.1	0.1	0.6	0.3	10.2	2.5
West Bengal	4.2	0.8	0.0	0.2	0.4	5.63	1.4

Source: Report of Higher Education In India: Issues related to Expansion, Inclusiveness, Quality and Finance, 2008, University Grant Commission, New Delhi.

4.5.5 Enrolment of Students in Higher Education

Higher education in India has expanded at a very fast rate, in terms of the number of institutions during the last six decades. This is in tune with trends all over the world and Indian educational network is the second largest in the world. But despite this expansion, rate of growth of student enrolment is not very impressive and Gross Enrolment ratio remains low at about 15 percent. Enrolment in higher education is a function of a variety of social, cultural,

institutional and economic processes. Other things remaining the same, enrolment is significantly affected by the availability of educational infrastructure and facilities. Availability of colleges and institutions of higher education, their quality and institutional capacity influence enrolment to a great extent, although the relationship between the two is not linear (UGC, 2008). Growth of enrolment of student between 1956-57 and 2009-10 is presented in Table 4.8. During this period the higher education system in the country showed more than 23 fold jump in terms of increase in the number of students. The total number of students enrolled in higher education during 1956-57 was 7.5 million which increased to 172.9 million in 2009-10. Most of the states in the country also followed the same growth pattern and witnessed more than 20 fold increase. In Andhra Pradesh, total number of students in higher education in 1956-57 was 55,530 which has increased to 14,21, 257 during 2009-10. In Odisha, the number has increased from merely 7,471 to 4, 38,732 during the period. Similar growth trend has been observed in states like Madhya Pradesh and Uttar Pradesh. Although, situation of Bihar was pretty well after independence and it was ahead of many states both in terms of number of institutions and number of students enrolled in higher education. But, later on stagnated growth of institutions has also affected number of students. During 1956-57, total number of students in higher education in the state was 59,314, which increased to 9, 47,959 during 2009-10 (**Table 4.9**).

Table 4.9
Growth of Student Enrollment (Excluding open University)
in Higher Education

<i>States</i>	<i>1956-57</i>	<i>2009-10</i>
Andhra Pradesh	55,530	1,421,257
Bihar	59,314	947,959
Kerala	38,134	363,886
Madhya Pradesh	37,834	1,070,333
Odisha	7,471	438,732
Punjab	50,175	314,044
Rajasthan	37,826	638,799
Uttar Pradesh	89,337	2,369,682
West Bengal	120,669	1,044,404
India	749,846	17,295,086

Source: Various Reports, Ministry of Human Resource Development,
Govt. of India.

4.5.6 Enrollment by Stages

Enrollment of students by level or stages of education during 2009-10 across major states is given in **Table 4.10**. The total number of students enrolled in the Universities in 2009-10 was 172.95 million, out of which 92,211 were in PhD or M.Phil, 1,833,507 were in post-graduation, 13,872,870 were in graduation, 1,407,406 in post school diploma courses and 89,092 in post graduate diploma courses. Percentage wise break-up of the enrolment data clearly shows that 80.21 per cent of the total enrolment was in under-graduate courses, 10.60 per cent in post-graduate courses, 8.14 per cent in post school diploma, 0.53 per cent in PhD or M.Phil and only 0.52 per cent of the total enrolment was in post-graduate diploma courses. Similar, pattern has been observed in most of the states where around 75 to 80 per cent of the students were enrolled in under graduate courses. Gujarat has shown a slightly different trend with 63.62 per cent of total students was in

under-graduate courses, 15.01 per cent in post-graduate courses and 20.15 per cent in post school diploma courses. Proportion of students enrolled for M.Phil or Ph.D courses was very low across all states and ranges between 0.1 to 0.6 per cent. However, Tamil Nadu and Andhra Pradesh have shown positive trend in this regard where the percentage of students enrolled for these courses is much above the national average (0.53 per cent). In Andhra Pradesh, 0.83 per cent and in Tamil Nadu 1.65 per cent of the total students were enrolled for PhD and M.Phil. The situation of Bihar is rather alarming with 92.09 per cent of the total students in under-graduate courses, 5.65 per cent in post-graduate courses and only 1.88 per cent in post school diploma courses. Merely 0.28 per cent of the total students were enrolled for PhD/ M.Phil. Lesser enrolment for higher level of education indicates that lesser number of people was opting for higher education in Bihar. Apart from social and financial reasons, this could be mainly due to relatively lesser availability of choices at higher level of education (**Table 4.10**).

Table 4.10
Enrolment (Excluding Open University) by Stages in 2009-10

<i>States</i>	<i>Ph.D/ M.Phil</i>	<i>Post Graduate Degree</i>	<i>Under Graduate Degree</i>	<i>Post School Diploma</i>	<i>Post Graduate Diploma</i>	<i>Grand Total</i>
Andhra Pradesh	11,770 (0.83)	160,987 (11.33)	1,064,402 (74.89)	183,970 (12.94)	128 (0.01)	1,421,257 (100.00)
Bihar	2,662 (0.28)	53,527 (5.65)	872,985 (92.09)	17,829 (1.88)	956 (0.10)	947,959 (100.00)
Gujarat	3,109 (0.33)	140,450 (15.01)	595,286 (63.62)	188,539 (20.15)	8,322 (0.89)	935,706 (100.00)
Haryana	1,345 (0.24)	29,868 (5.25)	434,407 (76.33)	102,675 (18.04)	829 (0.15)	569,124 (100.00)
Karnataka	1,540 (0.14)	31,129 (2.86)	900,442 (82.83)	149,913 (13.79)	4,020 (0.37)	1,087,044 (100.00)

Kerala	1,800 (0.49)	26,707 (7.34)	304,469 (83.67)	30,589 (8.41)	321 (0.09)	363,886 (100.00)
Madhya Pradesh	4,635 (0.43)	209,552 (19.58)	786,822 (73.51)	32,972 (3.08)	36,352 (3.40)	1,070,333 (100.00)
Maharashtra	7,989 (0.34)	280,392 (11.96)	1,730,417 (73.79)	316,105 (13.48)	10,261 (0.44)	2,345,164 (100.00)
Odisha	705 (0.16)	32,395 (7.38)	382,783 (87.25)	22,080 (5.03)	769 (0.18)	438,732 (100.00)
Punjab	2,106 (0.67)	47,781 (15.21)	224,563 (71.51)	39,217 (12.49)	377 (0.12)	314,044 (100.00)
Rajasthan	1,140 (0.18)	64,332 (10.07)	541,112 (84.71)	29,718 (4.65)	2,497 (0.39)	638,799 (100.00)
Tamil Nadu	20,432 (1.65)	163,145 (13.14)	950,603 (76.59)	107,014 (8.62)	0 0.00	1,241,194 (100.00)
Uttar Pradesh	8,226 (0.35)	263,069 (11.10)	2,055,947 (86.76)	41,383 (1.75)	1,057 (0.04)	2,369,682 (100.00)
West Bengal	4,184 (0.40)	85,212 (8.16)	926,909 (88.75)	24,700 (2.36)	3,399 (0.33)	1,044,404 (100.00)
India	92,211 (0.53)	1,833,507 (10.60)	13,872,870 (80.21)	1,407,406 (8.14)	89,092 (0.52)	17,295,086 (100.00)

Source: Statistics of higher & technical education 2009-10, Ministry of Human Resource Development, Government of India, 2011.

Note: Figures in parenthesis indicates percentage to total of all states.

4.5.7 Faculty-wise Student Enrolment

Table 4.11 shows the faculty wise student enrolment in higher and professional education across major states in India. Out of the total of 172.95 million students enrolled under different disciplines in higher education, 68.90 per cent were in general education, 11.60 per cent in engineering and related disciplines, 2.05 per cent in medicine, 0.52 per cent in agriculture, 2.09 per cent in management related studies, 3.15 per cent in education, 1.25 per cent in law and remaining 10.44 per cent were enrolled in other disciplines. Most of the states followed the same pattern and proportion of students enrolled in general stream hovers around 50 per cent

to 65 per cent and rest of them was enrolled for professional education like engineering, medicine, management, etc. In states like Andhra Pradesh (27.94), Kerala (27.83), Odisha (25.93), etc. more than 25 per cent of the total students enrolled in engineering and related discipline. In medicine, percentage of students enrolled was above the national average of 2.05 in states like Gujarat (3.51), Karnataka (6.44), Kerala (5.05), Odisha (6.25), Punjab (3.67) and Tamil Nadu (3.56). Representation of students in other professional courses was pretty good in these states. This could possibly due to greater availability and accessibility of institutions imparting professional degrees in these states. Here again, one can easily notice the lopsided development in education sector in Bihar, where general education has been given more importance than professional education. The total enrollment in the general stream (88.77 per cent) in the state is much higher than that in medical (1.09 per cent), engineering (0.94 per cent), agriculture (0.15), management (0.41), teacher training (0.82) and law institutions (6.25 per cent). One of the possible reasons for low enrolment in professional education would be lesser availability of choices and low absorption capacity of these institutions. Less enrolment in professional courses resulted into lesser availability of skilled manpower and thus relatively poor socio-economic growth of the state (**Table 4.11**).

Table 4.11
Faculty Wise Student Enrollment (Excluding Open University)

<i>States</i>	<i>Arts/ Science/ Commerce</i>	<i>Engine- ering & Allied</i>	<i>Medici- ne</i>	<i>Agricul- ture & Allied</i>	<i>Manage- ment & allied</i>	<i>Educati- on/ Teacher Training</i>	<i>Law</i>	<i>Others</i>	<i>Grand Total</i>
Andhra Pradesh	718,612 (50.56)	397,161 (27.94)	12,731 (0.90)	5,760 (0.41)	40,791 (2.87)	43,803 (3.08)	5,597 (0.39)	196,802 (13.85)	1,421,257 (100.00)
Bihar	841,514 (88.77)	8,883 (0.94)	10,341 (1.09)	1,438 (0.15)	3,925 (0.41)	7,749 (0.82)	14,830 (1.56)	59,279 (6.25)	947,959 (100.00)
Gujarat	459,998 (49.16)	105,868 (11.31)	32,834 (3.51)	3,394 (0.36)	38,258 (4.09)	54,040 (5.78)	9,532 (1.02)	231,782 (24.77)	935,706 (100.00)
Haryana	240,209 (42.21)	113,438 (19.93)	8,596 (1.51)	1,271 (0.22)	26,392 (4.64)	65,461 (11.50)	4,476 (0.79)	109,281 (19.20)	569,124 (100.00)
Karnataka	649,806 (59.78)	181,830 (16.73)	69,992 (6.44)	4,594 (0.42)	6,480 (0.60)	9,489 (0.87)	9,380 (0.86)	155,473 (14.30)	1,087,044 (100.00)
Kerala	199,249 (54.76)	101,274 (27.83)	18,360 (5.05)	987 (0.27)	3,641 (1.00)	3,543 (0.97)	3,309 (0.91)	33,523 (9.21)	363,886 (100.00)
Madhya Pradesh	839,594 (78.44)	50,315 (4.70)	16,340 (1.53)	2,303 (0.22)	39,644 (3.70)	10,143 (0.95)	18,986 (1.77)	93,008 (8.69)	1,070,333 (100.00)
Maharashtra	1,495,501 (63.77)	280,603 (11.97)	28,732 (1.23)	12,671 (0.54)	41,749 (1.78)	73,911 (3.15)	38,420 (1.64)	373,577 (15.93)	2,345,164 (100.00)
Odisha	227,356 (51.82)	113,767 (25.93)	27,430 (6.25)	693 (0.16)	12,299 (2.80)	812 (0.19)	8,414 (1.92)	47,961 (10.93)	438,732 (100.00)
Punjab	181,351 (57.75)	54,001 (17.20)	11,530 (3.67)	1,286 (0.41)	18,972 (6.04)	2,802 (0.89)	1,389 (0.44)	42,713 (13.60)	314,044 (100.00)
Rajasthan	424,501 (66.45)	96,007 (15.03)	13,633 (2.13)	3,602 (0.56)	12,754 (2.00)	46,994 (7.36)	7,280 (1.14)	34,028 (5.33)	638,799 (100.00)
Tamil Nadu	728,780 (58.72)	196,983 (15.87)	44,180 (3.56)	1,179 (0.09)	59,643 (4.81)	66,275 (5.34)	8,836 (0.71)	135,318 (10.90)	1,241,194 (100.00)
Uttar Pradesh	2,044,668 (86.28)	96,071 (4.05)	11,751 (0.50)	22,322 (0.94)	18,118 (0.76)	73,033 (3.08)	46,956 (1.98)	56,763 (2.40)	2,369,682 (100.00)
West Bengal	878,986 (84.16)	62,940 (6.03)	13,536 (1.30)	21,896 (2.10)	13,238 (1.27)	9,477 (0.91)	7,124 (0.68)	37,207 (3.56)	1,044,404 (100.00)
India	11,915,921 (68.90)	2,005,563 (11.60)	354,184 (2.05)	90,497 (0.52)	361,010 (2.09)	545,077 (3.15)	216,954 (1.25)	1,805,880 (10.44)	17,295,086 (100.00)

Source: Statistics of higher & technical education 2009-10, Ministry of Human Resource Development, Government of India, 2011.

Note: Figures in parenthesis indicates percentage to total of respective states.

4.5.8 Enrollment of Students by Gender

Gender-wise enrolment rate is given in **Table 4.12**. A look at the data indicates total number and the percentage of girls' students to total students. Bihar's performance is on lower side as compared to other states. Kerala has a higher percentage of girl's students enrolled in higher education as compared to their male counterparts. In most of the states, percentage of girls students is more than 40 per cent, whereas Andhra Pradesh (35.40), Bihar (31.25), Maharashtra (37.29) Odisha (25.87) has less than national level of 40 per cent (**Table 4.12**). However, comparing with prevailing sex ratio in states, the current enrolment ratio is not a worrying phenomenon. There are evidences which support the fact that there is rising trend of girl's participation in higher education across most of the states of the country.

Table 4.12
Total Enrolment in Higher Education by Gender, 2009-2010

<i>States</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>	<i>% of Girls students to Total</i>
Andhra Pradesh	1,0,68,218	5,85,490	16,53,708	35.40
Bihar	8,93,805	4,06,289	13,00,094	31.25
Gujarat	6,51,234	4,19,049	10,70,283	39.15
Haryana	3,52,696	2,41,199	5,93,895	40.61
Karnataka	7,13,536	5,46,502	12,60,038	43.37
Kerala	1,99,817	2,36,068	4,35,885	54.16
Madhya Pradesh	7,27,456	5,12,300	12,39,756	41.32
Maharashtra	17,16,620	10,20,644	27,37,264	37.29
Odisha	3,97,632	1,38,742	5,36,374	25.87
Punjab	1,85,053	1,63,365	3,48,418	46.89
Rajasthan	4,88,843	2,78,813	7,67,656	36.32
Tamil Nadu	7,71,183	6,14,068	13,85,251	44.33

Uttar Pradesh	15,11,434	10,24,923	25,36,357	40.41
West Bengal	7,36,293	5,13,366	12,49,659	41.08
India	1,24,44,600	82,96,140	2,07,40,740	40.00

Source: Statistics of higher & technical education 2009-10, Ministry of Human Resource Development, Government of India, 2011.

Note: Figures in parenthesis indicates percentage to total of all states.

4.5.9 Enrolment of Students by Community

Current level of enrolment in higher education by community is presented in **Table 4.13**. There are very low levels of enrolment of ST and SC students in comparison to their population level across the country. The national average is only about 12 per cent for SC students whereas it is as low as five per cent for ST students. This highlights the problem of lack of participation or accessibility of students belonging to these communities. State wise analysis of enrolment of students from SC & ST community shows that in some of the states like Andhra Pradesh (12.77), Karnataka (15.65), Maharashtra (12.90), Punjab (13.39), Rajasthan (12.52), Tamil Nadu (17.02) and West Bengal (15.93) the proportion of enrollment of SC students is better than national average. In case of participation of ST students in concerned Andhra Pradesh (5.99), Gujarat (6.85), Madhya Pradesh (6.16), Odisha (5.30), Rajasthan (10.10) and West Bengal (7.15) are amongst the top rankers. Higher population proportion of SC & ST communities would be one of the reasons for greater percentage enrollment in these states. But, greater availability of institutions of higher education in these states has definitely made higher education more accessible for this disadvantaged group of the society. SC population in Bihar is more than 15 per cent but, the enrolment of SC students is only about seven per cent. The number of ST population in the state as well as their participation in higher education is

also very low. Only 1.06 per cent of total enrollment belongs to students from ST community (**Table 4.13**).

Table 4.13
Total Enrolment in Higher Education by Community, 2009-10

States	<i>All Categories</i>	<i>SC Students</i>		<i>ST Students</i>	
	<i>Total</i>	<i>Total</i>	<i>% to Total</i>	<i>Total</i>	<i>% to Total</i>
Andhra Pradesh	16,53,708	2,11,137	12.77	99,082	5.99
Bihar	13,00,094	87,569	6.74	13,789	1.06
Gujarat	10,70,283	90,979	8.50	73,265	6.85
Karnataka	12,60,038	1,97,252	15.65	63,122	5.01
Kerala	4,35,885	50,906	11.68	6,132	1.41
Madhya Pradesh	12,39,756	1,21,042	9.76	76,325	6.16
Maharashtra	27,37,264	3,53,179	12.90	66,437	2.43
Odisha	5,36,374	30,661	5.72	28,405	5.30
Punjab	3,48,418	46,662	13.39	269	0.08
Rajasthan	7,67,656	96,092	12.52	77,515	10.10
Tamil Nadu	13,85,251	1,75,906	12.70	7,469	0.54
Uttar Pradesh	25,36,357	4,31,797	17.02	9,186	0.36
West Bengal	12,49,659	1,99,030	15.93	89,369	7.15
India	2,07,40,740	24,39,585	11.76	10,80,898	5.21

Source: Statistics of higher & technical education 2009-10, Ministry of Human Resource Development, Government of India, 2011.

4.5.10 Gross Enrollment Ratio

Gross Enrollment Ratio (GER) indicates the capacity of the education system to enroll students of a particular age group. In simple terms, it shows the general level of participation in a given level of education. A high GER generally indicates a high degree of participation. A GER value approaching 100 per cent indicates that a country is, in principle, able to accommodate all of its school-age population. As against the national

average of 15.0 per cent, the GER in higher education for Bihar is 11.0 per cent which is much below the national average. The GER figure for Kerala (13.1), Maharashtra (21.4), Andhra Pradesh (16.9) and Karnataka (18.1) are much above the national average. GER in higher education for females is also very low (7.5) in the State (**Table 4.14**).

Table 4.14
Gross Enrollment Ratio in Higher Education, 18-23 Years

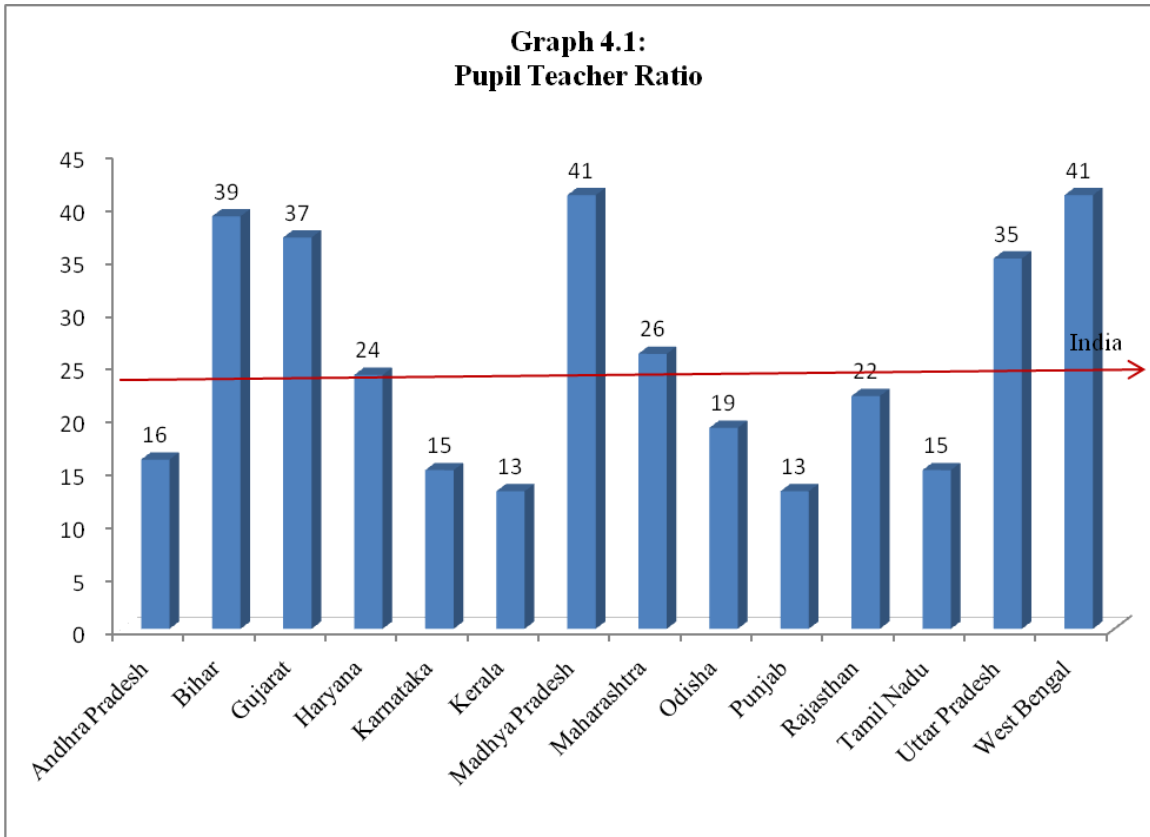
States	Male	Female	Total
Andhra Pradesh	21.2	12.3	16.9
Assam	11.5	6.2	9.0
Bihar	14.1	7.5	11.0
Gujarat	18.3	13.2	15.9
Haryana	21.2	16.8	19.1
Jammu & Kashmir	18.7	17.6	18.2
Karnataka	19.8	16.3	18.1
Kerala	12.0	14.2	13.1
Madhya Pradesh	16.5	13.1	14.9
Maharashtra	25.3	16.9	21.4
Odisha	16.6	5.9	11.3
Punjab	10.6	10.9	10.8
Rajasthan	11.5	7.4	9.6
Tamil Nadu	20.7	17.2	19.0
Uttar Pradesh	12.0	9.5	10.9
West Bengal	13.6	10.2	11.9
India	17.1	12.7	15.0

Source: Statistics of higher & technical education 2009-10, Ministry of Human Resource Development, Government of India, 2011.

4.5.11 State-wise Pupil - Teacher Ratio

The number of students per teacher provides pupil-teacher ratio. It gives the number of students a teacher has to teach. Higher the PT ratio means less number of teachers for imparting education to its students. In terms of PT

Ratio, Bihar is behind the national average of 24. Bihar has 39 students per teacher whereas, same figure stands at 16 in Andhra Pradesh, 15 in Karnataka, 13 in Kerala and Punjab, and 15 in Tamil Nadu (**Graph 4.1**).



4.6 Recent Initiatives by the Government of Bihar

It is heartening to note that the state government in recent years has taken some initiatives in a planned manner to revive the higher education system in the state. Several new institutions were established in last couple of years. The proposals of several other institutions are in pipeline. Some of the institutions which were established recently are: Patna extension center of BIT Mesra, Indian Institute of Technology –Patna, Central University of

Bihar- Gaya, National Institute of Pharmaceutical Education and Research - Muzaffarpur, National Institute of Fashion Technology-Patna, Chanakya National Law University, and Chandragupt Institute of Management both in Patna. The Aryabhata Knowledge University has also started its operation in Patna. Steps are taken to revive the ancient Nalanda University as Nalanda International University. With the objective to equip students with the latest skills and customized short-term training programs at an affordable cost, Bihar Knowledge Center has been established by Government of Bihar. The proposal for opening of few more specialized universities and institutions are under consideration. They are Rashtra Kavi Ramdhari Singh Dinkar Hindi University, Women's University, Sports University and Bihar University of Information Technology. Four more engineering colleges will soon be operational at Chhapra, Madhepura, Begusarai and Sitamarhi districts of the state.

4.7 Conclusion

In ancient times, Bihar had well governed administrative system in the country. Education sector was well developed with universities like Nalanda and Vikramshila attracting students from all over the world. But, Bihar with such a glorious history of education and learning in the past is currently one of the most educationally backward states of the country. It is evident from the preceding analysis that the situation of higher education system in Bihar is rather depressing. The current status of higher education in the state is characterized by low enrolment ratio particularly among girls, low completion rate, low college population index and poor qualitative as well as quantitative infrastructure. Gross enrolment ratio in Bihar is amongst the lowest in the country with wide gaps between males and females. The study

of the status of educational institutions in Bihar reveals that there is a mismatch between demand and supply of educational institutions. The main problem of the higher and technical education system is its inability to cater to the demand for quality education. Though, several quality institutions were established in recent years, but they are not capable enough to cater the growing demands of the students. Most of the new proposals are pending due to government apathy. There appears to be a correlation between the quantity and quality of higher educational institutions in the State and its economic and industrial development. More number of qualified manpower is a necessary as well as sufficient condition for sustainable growth of the economy. This also implies that regional socio-economic imbalances and the creation of capacity for higher education in the state are mutually related. The deteriorated situation of higher education in the state needs to accord priority.