



Chapter 7

Education

Human Resource Development is an essential input for promoting the economic growth and development. Education and training, by imparting knowledge and skills, constitute the most significant factor in raising the level of the quality of human resources. They are the core sectors for generating the proficiencies required for employment and bringing about much needed change in the social environment, leading to overall progress through efficient use of resources. An appropriate education system also cultivates knowledge, a positive attitude, awareness and sense of responsibility towards rights and duties and imparts inner strength to overcome oppression and inequality.

Education being a vast subject, the present chapter has been divided into three parts. The first section is on literacy followed by an overview of school and higher education in the second section. Technical education is the focus of discussion in the third section. Effort has, however, been made to retain the linkages between the different sections wherever possible.

Literacy

Literacy has made remarkable progress in Himachal Pradesh. At the time of independence, with only eight per cent literates, Himachal Pradesh had the lowest literacy level in India. The state was in fact classified as a “backward” region in North India. The literacy rate however improved steadily and today it ranks 11th among all the states and UTs in India which is a remarkable achievement.

The proportion of total literates in the state (77.13%) is higher than the all-India average of 65.38 per cent, according to the 2001 census. As Table 7.1 shows, the literacy rate in Himachal increased by 21.38 per cent points from 1981 to 1991 and by 13.37 per cent points during the last 10 years.

TABLE 7.1
Literacy Rate, 1951-2001

(in per cent)

Year	Persons	Males	Females
1951	7.98	—	—
1961	21.3	—	—
1971	31.96	43.19	20.23
1981	42.48	53.19	31.46
1991*	63.86	75.36	52.13
2001*	77.13	86.02	68.08

Source: Census of India, Provisional Population Totals, Paper 1 of 2001, Himachal Pradesh.

Note: * Excludes 0-6 population.

Female literacy increased by 15.95 per cent points and the male literacy by only 10.66 per cent points during the last decade. Despite the relatively faster rate of growth of female literacy, the gap between male and female literacy continues to be very high at 17.94 per cent.

TABLE 7.2
Literacy among Scheduled Castes and Scheduled Tribes (1991)

(in per cent)

District	Scheduled Castes	Scheduled Tribes
Bilaspur	59.10	48.40
Chamba	36.88	36.70
Hamirpur	68.51	96.19
Kangra	60.53	78.88
Kinnaur	45.67	59.03
Kullu	42.39	68.21
Lahaul & Spiti	54.91	55.30
Mandi	51.83	58.53
Shimla	50.11	61.22
Sirmaur	40.69	33.45
Solan	53.22	57.63
Una	62.99	90.57
Himachal Pradesh	53.20	47.09

Source: Human Development Report, Himachal Pradesh, 2002.

In Himachal Pradesh 47 per cent of the Scheduled Castes (SC) and 53 per cent of the Scheduled Tribes (ST) are illiterate as per the 1991 data. Hamirpur and Una are the only districts with near total literacy among STs. Illiteracy among the SCs is as high as 63 per cent in Chamba, 60 per cent in Sirmaur, 58 per cent in Kullu and 54 per cent in Kinnaur. Among STs, illiteracy is as high as 63 per cent in Chamba, 67 per cent in Sirmaur and 52 per cent in Bilaspur.

Table 7.3 shows that Chamba district has the lowest literacy rate, followed by Sirmaur and Hamirpur district the highest, and closely followed by Una and Kangra districts. The other districts with literacy rates above the state average of 77.13 per cent are Shimla, Bilaspur and Solan.

The rural-urban literacy gap, which exists in all the districts, is the highest in Chamba, Sirmaur and Kullu. It is also very high among females. 34 per cent rural women are illiterate as compared to only 14 per cent urban women. Literacy of rural women in the districts of Chamba, Lahaul & Spiti, Sirmaur and Kullu calls for special interventions, as nearly 40-50 per cent of them in these districts are illiterate.

In brief, Himachal Pradesh has tremendously improved its literacy percentage. However, the literacy of females and SCs, especially in few pockets, needs particular government attention.

Education Policy and Plans

The Government of India's National Policy on Education, 1986 (modified in the year 1992) is a

forthright statement on education as an empowering agent. The Directive Principles of State Policy in the Constitution provide for free and compulsory education for all children till the age of 14 years.

The famous Unnikrishnan Case declared primary education as a fundamental right. The 93rd Amendment has added a new clause to make elementary education a fundamental right. A state subject so far, education has been brought on the Concurrent List. Himachal Pradesh does not have any policy of its own and adheres to the national policy. In order to achieve universalisation of education, the Government of Himachal Pradesh has already made primary education compulsory by promulgating the Himachal Pradesh Compulsory Primary Education Act, 1997. Launching of Sarva Shiksha Abhiyan by the Government of India further reflects its commitment towards the universalisation of elementary education. It is an effort to improve the performance of schools and provide community owned quality education. Its specific aims are to enroll and retain children and bridge gender disparities at elementary level of education.

Perusal of the Five Year Plans of Himachal Pradesh show that during the first six plans, most of the development expenditure was consumed in expansion, i.e., opening new schools, and provision of facilities for free and universal primary education. It was only during the Seventh Plan that the emphasis shifted to qualitative improvement and acceleration of the process of modernisation, besides increasing access. During the Eighth Plan, emphasis was on technical and vocational education in place of general education. During the

TABLE 7.3
Literacy Rates by Residence, Sex, 2001

State/district	Total			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Himachal*	77.13	86.02	68.08	75.71	85.20	66.30	89.59	92.49	85.91
Chamba	63.73	77.22	49.70	61.50	75.73	46.81	89.84	93.74	85.37
Kangra	80.68	88.19	73.57	80.31	88.05	73.04	87.11	90.46	83.45
Lahaul & Spiti	73.17	82.76	60.94	73.17	82.76	60.94	—	—	—
Kullu	73.36	84.55	61.24	72.02	83.81	59.43	88.31	92.05	83.49
Mandi	75.86	86.67	65.36	74.71	86.06	63.80	91.08	94.26	87.55
Hamirpur	83.16	90.86	76.41	82.62	90.70	75.68	89.97	92.66	86.86
Una	81.09	88.49	73.85	80.93	88.65	73.48	82.71	86.99	77.99
Bilaspur	78.80	87.13	70.53	77.97	86.68	69.42	90.66	93.11	87.84
Solan	77.16	85.35	67.48	74.50	83.66	64.49	88.67	91.44	84.05
Sirmaur	70.85	79.73	60.93	68.69	78.19	58.14	88.89	92.33	84.87
Shimla	79.68	87.72	70.68	75.76	85.46	65.50	92.34	34.25	89.77
Kinnaur	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A

Source: Census of India, Provisional Population Totals, Paper 2 of 2001, Himachal Pradesh. N.A. - Not available * Excludes Kinnaur district

TABLE 7.4
Outlay and Expenditure (Rs. in lakh)

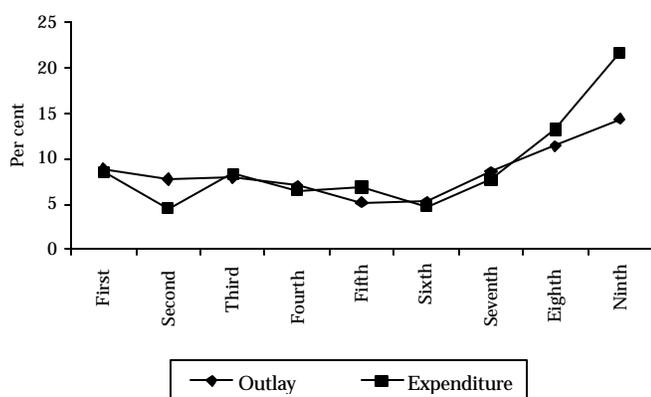
Plans	Approved Outlay				Expenditure			
	Gen. Edu	Tech. Edu	Others	Total	Gen. Edu	Tech. Edu	Others	Total
First Plan (1951-56)	—	—	—	50.00 8.86	—	—	—	45.14 8.56
Second Plan (1956-61)	—	—	—	114.00 7.74	—	—	—	72.7 34.54
Third Plan (1961-66)	—	—	—	223.00 7.98	—	—	—	282.11 8.33
Fourth Plan (1969-74)	661.00 [92.97]	50.00 [7.03]	—	711.00 [100.00] 7.01	695.96 [94.07]	43.85 [5.93]	—	739.81 [100.00] 6.52
Fifth Plan (1974-79)	1200.00 [96.77]	40.00 [3.23]	—	1240.00 [100.00] 5.19	1082.04 [96.92]	34.38 [3.80]	—	1116.42 [100.00] 6.89
Sixth Plan (1980-85)	2371.00 [81.13]	179.00 [6.12]	372.52 [12.75]	922.50 [100.00] 5.22	2629.69 [83.17]	200.51 [6.34]	331.8 [10.49]	3162.00 [100.00] 4.76
Seventh Plan (1985-90)	6717.00 [75.21]	1137.00 [12.73]	1077 [12.06]	8931.00 [100.00] 8.51	7585.10 [77.22]	1168.61 [11.90]	1069.03 [10.88]	9822.74 [100.00] 7.68
Eighth Plan (1992-97)	22705.5 [79.88]	4200.00 [14.78]	1519.5 [5.35]	28425.00 [100.00] 11.36	39530.75 [85.99]	4312.96 [9.38]	2127.35 [4.63]	45971.06 [100.00] 13.20
Ninth Plan (1997-2002)	74971.52 [91.74]	3880.00 [4.75]	2869.22 [3.51]	81720.74 [100.00] 14.31	144509.22 [93.92]	6814.67 [4.42]	2533.29 [1.65]	153857.18 [100.00] 21.61
Tenth Plan (2002-2007)	263310.8 [96.36]	5183.91 [1.90]	4771 [1.75]	273265.71 [100.00] 21.83	—	—	—	—

Source: Different issues of Five-Year Plan Documents.

Ninth Plan, the main focus was on both qualitative improvement and expansion of schools to meet the target of making primary education compulsory by 1997-98. Government embarked upon an expansion programme based on detailed mapping of existing schools and identification of the unserved areas.

Percentage of the outlay and expenditure in different five-year plans on education is given in Table 7.4 and Figure 7.1.

FIGURE 7.1
Outlay and Expenditure



Source: Different issues of Five-Year Plan Documents

The data reveal an increase in the outlay and expenditure from 8.8 per cent and 8.6 per cent respectively in the First Plan to 14 per cent and 21.6 per cent in the Ninth Plan, although they had decreased during the Fifth and Sixth Five Year Plan periods.

TABLE 7.5
Expenditure on Education as Percentage of GSDP

State	Per cent of GSDP on Education
Himachal Pradesh	7.08
Haryana	2.57
Kerala	3.25
Punjab	2.87
All India	3.60

Source: National Human Development Report, Planning Commission, 2000.

It is gratifying to note that the Himachal Government is giving priority to the education sector. It was spending 7.08 per cent of the GSDP on education in comparison to only 2.87 per cent by Punjab, 3.25 per cent by Kerala, 2.6 per cent by Haryana and 3.6 per cent at the national level till the

year 2000. The expenditure on education as percentage of GSDP in Himachal Pradesh has further significantly risen to 15.70 per cent in 2002. The budget allocation in the social sector has increased in Himachal Pradesh. The DPEP programme and also the implementation of the Fifth Pay Commission have contributed to the increase in the allocation to education in Himachal Pradesh.

School and Higher Education

The overall educational profile of the population in Himachal, is indicated in Table 7.6.

TABLE 7.6

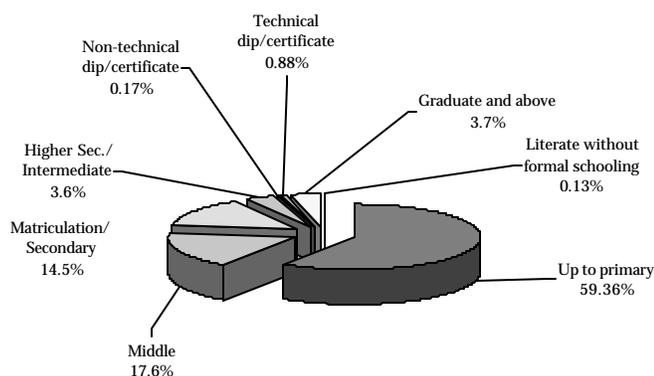
Educational Attainment in Himachal Pradesh, 1991

Educational Attainment	Population (%age)
Total Population	4330456 (100.00)
Illiterate	1565047 (36.14)
Literate	2765409 (63.8)
Literate without formal schooling	5485 (0.13)
Below primary	728996 (26.36)
Primary	913587 (33.0)
Middle	485637 (17.6)
Matriculation/Secondary	400178 (14.5)
Higher Sec./Intermediate	100844 (3.6)
Non-technical diploma or certificate not equivalent to degree	4740 (0.17)
Technical dip./certificate not equal to degree	24285 (0.88)
Graduate and above	101657 (3.7)

Source: Socio-cultural Tables, Census of India (HP), 1991.

FIGURE 7.2

Educational Attainment of Literates



Source: Socio-cultural Tables, Census of India (HP), 1991.

According to the 1991 Census, amongst the literate, nearly 60 per cent of the population had studied only up to the primary level or below, 18 per cent up to the middle and 15 per cent up to the matriculation level. Only 3.7 per cent of the total population had studied up to the graduate level or above. These figures are alarming. Himachal Pradesh has achieved the target of high literacy, so the main focus should now be to make the literate population study beyond the primary level. Another fact revealed is the failure of the education system at the secondary level, as the desired dispersal to the various streams has not taken place. This is obvious from the low figures of diploma holders. The main focus of the government should now be on secondary and higher education.

TABLE 7.7

Number of Educational Institutions in Himachal Pradesh

Schools	
Primary schools	10634
Middle schools	1709
High/Sr. Sec. schools	1832
Universities	3
Art/Science/Comm. Colleges	64

Number of Recognised Institutions for Higher Education

Medical colleges	2	Indira Gandhi Medical College, Shimla; Dr. Rajendra Prasad Government Medical College Tanda, Kangra.
Colleges of education	1	
Colleges of agriculture/horticulture	3	
Sanskrit institutions	17	
District Institutes of Education and Training	12	
Law colleges	1	
Polytechnic institutions	5	
Dental colleges	4	Govt. Dental College, Shimla; DAV Dental College, Solan; Bhojia Dental College & Hospital Dental College Sundernagar (HP).

Number of Universities

3	HP Uni., Summer Hill, Shimla; Dr. Y.S. Paramour Uni. of Horticulture & Forestry, Nauli, Solan & C.S.K. HP Krishi Vishva Vidhalaya, Palampur.
---	--

Source: Education Department, Himachal Pradesh, 2001.

TABLE 7.8

Expansion in Number of Educational Institutions

Year	Primary/Junior Basic	Middle	High	Colleges of General Education
1970-71	3768	742	435	15
1980-81	6093	1032	665	27
1990-91	7471	1066	1125	44
1992-93	7713	1067	1140	45
1993-94	7617	1108	1266	50
1994-95	7693	1101	1231	55
1995-96	8393	1086	1250	55
1996-97	9142	1037	1278	63
1997-98	10484	1056	1339	52
1998-99	10633	1189*	1525*	57
1999-00	10633	1484*	1563*	64
2000-01	10634	1709*	1832*	64

Source: Education Department, Himachal Pradesh, 2001.

Note: Figures Inclusive of Pvt./Unaided Schools.

TABLE 7.9

District-wise Accessibility to Primary and Middle Schools

District	Average Radial Distance Per Primary School (km.)	Average Radial Distance Per Middle School (km.)
Bilaspur	0.79	1.48
Chamba	1.39	2.69
Hamirpur	0.84	1.28
Kangra	1.01	1.73
Kinnaur	3.28	5.39
Kullu	1.59	3.30
Lahaul & Spiti	4.59	8.87
Mandi	0.86	1.63
Shimla	1.01	1.85
Sirmaur	0.97	1.96
Solan	0.90	1.66
Una	0.97	1.57
Himachal Pradesh	1.29	2.36

Source: Department of Education, Government of Himachal Pradesh. Cf Human Development Report, HP, 2002.

The available data in Table 7.8 reveal a quantitative increase in the number of schools. In this respect the state is progressing well.

Accessibility to Schools

The state has almost achieved the prescribed norm of having a primary school at the distance of one km in almost all the districts barring areas with scattered habitations like Kullu, Chamba, Kinnaur and Lahaul and Spiti. The average distance from middle schools was 2.36 km, which was less than the government norm of three km. However, it is felt that the distance norm prescribed by the Government of India does not reflect the actual picture in the hilly terrain, as the real distance covered in hilly areas is much more, as the habitations are scattered. Unlike in the plains, one to three km in a hilly terrain often means climbing down

one ridge and climbing up another and/or crossing a rivulet. All this twice a day is not easy for elementary school-going children. Hence, it is felt that the government of Himachal Pradesh should formulate its own policy of providing accessibility to schools keeping its hilly terrain in mind. The government is, however, trying hard to provide universal accessibility to primary schools and in 2000-2001 the number of schools touched 10,634.

Enrolment in Schools

The data in Table 7.10 show that most of the children of school going age are already on the rolls in schools of the state. Himachal has a much higher enrollment rate than the national average and Punjab and Haryana. The percentage of 6-11 and 11-14 age groups in Himachal Pradesh has in fact increased even more in

TABLE 7.10

Age-specific Enrolment Ratios in Select States

States	6 to below 11			11 to 14			6 to 14		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Punjab	74.99	72.91	74.01	72.18	65.82	69.19	73.96	70.31	72.24
Haryana	71.07	67.24	69.27	63.56	52.82	58.65	68.33	62.13	65.45
Himachal Pradesh	86.96	82.87	84.95	87.10	76.74	82.05	81.02	80.52	83.84
Kerala	84.74	82.12	83.44	94.98	93.67	94.33	88.75	86.63	87.70
India	73.20	59.13	66.40	65.02	48.20	57.06	70.33	55.40	63.17

Source: Sixth All India Education Survey, 1999.

2002 to 95.77 and 86.18 respectively. DPEP has also acted as a catalytic agent in speeding up the enrolment rates in Himachal Pradesh. Mid-day meal scheme also seems to have created a real impact in terms of children attending schools.

Under the SSA programme, the household survey revealed only 6356 out of school children and steps are being taken to bring these children also in the mainstream of education. EGS schemes have been launched for this purpose. As per status of 2000-01 in DPEP districts (Chamba, Kullu and Sirmaur), there were 160 out of schools children. The state has thus nearly achieved universalisation of primary education in terms of accessibility and enrolment. The *Public Report on Basic Education* (PROBE) 1998 which examined the state of primary schooling in India has singled out HP among the northern states for its remarkable progress towards achieving the goal of universal elementary education. The report suggests that the state has done better than Kerala and Goa and the main reason reported is the HP Compulsory Primary Education Act. This Act makes it mandatory for parents to ensure that their children attend schools. Fines on parents, who do not comply, are imposed under this Act. Parental

motivation and monitoring by the community have been reported as the major factors for the success story in HP.

Table 7.11 shows that the enrolment of girls at the primary level is nearly as high as that of boys. The state has achieved gender equity in terms of enrolment of students at the primary level. The gap between male and female enrolment, however, keeps increasing as they move towards higher levels of education. It increases from two per cent at the primary level to four per cent at the middle, six per cent at the high level and 17 per cent at the higher secondary level. Although there is no consistent pattern among the STs, there is a consistent decline in the enrolment of SCs, as they move to higher education, especially after Class X. Such, then is the plight of girls and SCs in Himachal Pradesh in spite of the numerous incentives and schemes initiated by the government for them at various levels, such as free uniforms, attendance scholarships, free education for girls at all levels, mid-day meal programme, free text-books, IRDP scholarships and merit scholarships. Even at the secondary level there are pre-matric scholarship and post-matric scholarship schemes.

TABLE 7.11
Enrolment in Schools, Himachal Pradesh

	Boys			Girls			Boys+ Girls		
	Total	SCs	STs	Total	SCs	STs	Total	SCs	STs
High Sec (IX-XII)	55721 (58.85)	8639 (15.50)	2211 (3.97)	38955 (41.1)	5659 (14.01)	1343 (3.45)	94676 (14.89)	14098 (14.89)	3554 (3.75)
High (IX-X)	98165 (53.51)	21480 (21.88)	7243 (7.38)	85276 (46.5)	14580 (21.06)	4559 (5.35)	183441 (21.29)	39060 (21.29)	11802 (6.43)
Middle (VI-VIII)	184065 (52.4)	46843 (25.45)	5666 (3.08)	167408 (47.6)	41113 (24.56)	4884 (2.92)	351473 (25.03)	87959 (25.03)	10550 (3.00)
Primary* (I-V)	339172 (51.17)	107656 (31.74)	15875 (4.68)	323601 (48.8)	103123 (31.87)	15680 (4.85)	662773 (31.8)	210779 (31.8)	31555 (4.76)

Source: Selected Educational Statistics, GoI, 1998-99.

Note: * Data Pertains to 2001-02.

TABLE 7.12
Drop-out Rates, Himachal Pradesh

Category	I to V			VI to VIII			IX to X		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
All	1.96	1.54	1.39	4.4	6.2	5.3	13.45	18.03	15.50
SCs	2.00	1.90	1.95	10.5	10.1	10.3	21.54	25.23	23.53
STs	3.79	1.71	2.34	7.9	5.3	6.3	11.69	13.34	12.93

Source: Directorate of Education, HP, 1999-2000.

Retention in Schools

The above data reveal that Himachal Pradesh has reduced its drop-out rates tremendously up to the elementary level. It has attained nearly 99 per cent retention rate at the primary level, which is a real achievement. DPEP has played a major role in this regard. But the drop-out rates are still very high in Classes IX and X. The increase is almost three times for all students from the elementary to the high level. The dropout rate is also very high among SCs and girls.

Poverty, child labour, distance from schools and the quantum of homework are the most important reasons for drop-outs at the secondary level in Himachal Pradesh. Uninteresting and often irrelevant school curriculum and unattractive methods of teaching are the other reasons. The drop-out rate among girls increases at higher levels of education, as parents are reluctant to send their daughters to high schools because of the distance. Girls are often not able to do their homework because of their domestic chores. This is another reason for their dropping out of schools (Cranney, 2001).

Quality of School Education

Access, enrolment and retention in schools have improved considerably, especially at the primary level. Hence, the main target of the government should now be on improving the quality of school education.

Teacher-pupil ratio: It is an important indicator of the quality of school education.

State	Primary	Upper Primary	Secondary
Haryana	47	34	23
Himachal Pradesh	30	18	30
Kerala	30	29	29
Punjab	40	18	28
India	42	37	29

Source: National Human Development Report, Planning Commission, GoI, 2002.

The teacher-pupil ratio at all levels in educational institution in Himachal is fairly adequate, but regional variations exist. The ratio was worst in Kullu (1:39), followed by Una (1:38) at the primary level and worst in Bilaspur and Una at the secondary level. Lahaul & Spiti, however, claims the highest number of teachers. The state has a better pupil-teacher ratio than at the

all-India level and Punjab and Haryana at the primary and the upper primary level. The number of teachers in Himachal Pradesh is adequate, however, redistribution and rationalisation of teachers is a must to make them available in the remote areas as well. Accepting the geographic reality, multi-grade and multi-level teaching continues to pose a challenge to the quality of learning. There are at present 28,829 sanctioned posts of JBTs, HTs and CHTs teachers in the primary schools of the state, out of which 25,783 posts have been filled and the rest are lying vacant.

As per the data of the year 2000, there were 1336 single-teacher primary schools. Efforts are being made to provide required number of at least two teachers in every primary school of the Pradesh by the way of para/contract teachers in these schools (Directorate of Education, 2003). The teacher in the single-teacher school teaches Classes I and II without grading them in separate classes and similarly Classes III to V are not graded and they learn collectively. In some single-teacher school, the students of Classes IV or V are given the responsibility of teaching the lower Classes I and II.

Untrained teachers: Further, to impart quality education, it is essential that the teachers should be well qualified and trained.

Level	Trained	Untrained	Total
Primary	18804 (75.84)	5990 (24.15)	24794 (100.0)
Upper Primary	5774 (96.65)	200 (3.34)	5974 (100.0)
High	10180 (96.83)	333 (3.16)	10513 (100.0)

Source: SCERT, Government of HP, 2001.

Table 7.14 reveals that although the number of trained teachers is adequate at the upper primary and high levels, at the primary level nearly one-fourth of them are not adequately trained and do not have the requisite qualifications to meet the educational needs of the children. This is adversely affecting the quality of school education.

It is, however, important to mention that the state government has taken a number of steps to raise the number of teachers in the understaffed schools, especially in the remote and inaccessible areas. Himachal recruited teachers locally under the scheme of

Vidya Upasak Yojna during 2001, 1,681 posts of para teachers (*vidya upasaks*) and 1,398 *Gram Vidya Upasaks* were appointed in the primary schools. These para teachers are provided 21 days teachers' training course under DIET.

The problem of teachers' absenteeism: Absenteeism of the teachers has been further reported as the single most important factor affecting quality of education in Himachal Pradesh.

Lack of infrastructural facilities in schools: For the child, the school is one of the main agencies of socialisation and the first pre-requisite of schooling is availability of good quality infrastructure for imparting education. Hence, a school must have an attractive environment. The data in Tables 7.15 and 7.16 do not present a very positive picture of the infrastructure facilities available in the schools of Himachal Pradesh. A significant percentage of the students at all levels, except higher secondary, study in *kutchha* buildings, thatched huts, tents and open spaces. Special efforts are needed to improve the conditions of these buildings in view of the vagaries of the climate in Himachal Pradesh.

TABLE 7.15

Type of Buildings in Schools, Himachal Pradesh

Level	Pucca	Partly Pucca	Kutchha	Thatched Huts	Tents	Open Space	Total
Primary*	5135 (48.8)	2483 (23.6)	2512 (23.9)	—	7 (0.07)	392 (3.72)	10529
Upper Primary	397 (35.8)	262 (23.6)	366 (33.03)	5 (0.45)	1 (0.09)	77 (6.9)	1108
Secondary	447 (43.6)	369 (36.0)	200 (19.5)	0	0	9 (0.87)	1025
Higher Secondary	158 (65.6)	74 (30.7)	9 (3.7)	0	0	0	241

Source: Sixth All India Educational Survey, 1999, * DISE-2000.

TABLE 7.16

Schools Having Ancillary Facilities, Himachal Pradesh

Level	Drinking Water (%)	Urinals	Separate Urinals for Girls (%)	Lavatory (%)	Separate Lavatory for Girls (%)
Primary	78.0*	15.7*	6.27*	4.46	2.56
Upper Primary	74.01	28.88	19.86	10.92	5.42
Secondary	88.20	61.56	50.93	42.63	23.22
Higher Secondary	98.34	90.87	83.82	71.78	53.53

Source: Sixth All India Educational Survey, 1999, * DISE-2000.

Although the health of the pupils depends to a large extent upon the supply of clean and potable drinking water and neat and clean toilets to keep the flies and

mosquitoes away from the schools premise, the data on ancillary facilities reveal that 22 per cent of the schools at the primary level and one-fourth of the schools at the upper primary level in Himachal do not have potable drinking water facilities. Very few schools at the primary and upper primary levels have urinals. The number of primary and middle schools with lavatories are few. Even at the secondary and the higher secondary levels, where girls need privacy, 77 per cent and 47 per cent of the schools respectively do not have separate lavatories for girls. In a nutshell, infrastructure facilities available in the schools of Himachal are poor. The government, however, claims that it is installing drinking water tanks and toilets in primary schools under the Tenth Finance Commission.

Heavy, obsolete syllabus, outmoded teaching methods and inappropriate examination system:

Overall improvement of curriculum, teaching practices and examination methods was the core target for secondary education in the National Policy on Education (1986). However, at present, the heavy syllabus prescribed is adversely affecting the quality of school education and the creativity of the students. Although the Himachal Pradesh Government claims that it is striving to make the curriculum more relevant to local specificities, many studies reveal that what the children learn in schools are not relevant in everyday life. It is felt that the curriculum framework should be based on both compulsory and flexible subjects. Except languages, arithmetic and general science, all other subjects, such as algebra, geometry, geography and even history are not of much practical value in day-to-day life and hence could be listed as optional subjects. It is important that the curriculum should be made more relevant and flexible.

Quite often, the teachers encourage memorising the contents of books and rote learning. There is also very little stress on social and ethical values in the curriculum. Methods of teaching and the curriculum have been reported as uninspiring. This has been a major reason for school drop-outs.

Poor examination results: The present mode of teaching/learning is a matter of concern, when one considers that in Himachal Pradesh the pass percentage in the matriculation examination is only 46 and in +2 is only 40. There were only six per cent first divisions at the matriculation level and nine per cent at the +2 level. Nearly one-fourth of the students at both the levels scored second division and the majority were third divisioners.

As no weightage is given to the marks attained in 10+2, students in these classes are busy preparing for various entrance exams, which explains to some extent the poor results at this level.

TABLE 7.17

Pass Percentage in Matriculation and +2 Examination, 1996-2001, Himachal Pradesh

Year	Matriculation	10+2
1996-97	44.50	33.40
1997-98	67.30	28.30
1998-99	45.70	31.10
2000-01	46.42	40.00

Source: Education Department, HP, 2001

Low examination results at grades 10 and +2, however, clearly indicate the weakness in the knowledge and understanding of the subjects among the students. It is a direct indicator of the low quality of teaching in schools. Otherwise, how could one explain more than a 50 per cent failure rate in the Board Examinations at the matriculation level? Since the parents and the state have invested such huge amounts for a period of 10 to 12 years in the education of children, is not this an expression of the failure of the entire education system?

In fact the traditional methods of teaching, such as the lecture method is still dominant in schools. Teaching continues to be teacher centred. There is need to re-orient the teaching-learning process so as to make it learner- and activity-centered. It is suggested that while classroom learning is important, what the children learn through self-observation, outside the classroom, is equally important. They must become active participants in the process of learning through observations, field studies, experiments and discussions. Their individuality and creativity must be given due importance. Innovations in curriculum, which should be based on the needs of the learners and related to the local environment, are necessary. Priority also needs to be given to a reorientation in the outlook of the teachers, which at present is getting highly commercialised, as reflected in the number of tuitions being encouraged by them. The examination system, too, has to be changed so that it recognises and evaluates creativity and independent thinking, rather than mere memorisation.

Today, the teachers have to play possibly the most important role in enabling the coming generations to develop capabilities to cope with a profoundly change-

oriented world. But this demands the education and training of teachers as the first area of intervention.

At higher levels of education, such problems as imbalanced and unplanned institutional growth and gap between general and professional courses exist.

There are three universities and 64 Art and Science colleges in the state (40 government and 24 private). These include one B.Ed. College at Dharmashala and one SCERT Education Institute at Solan. There are six medical colleges including four dental colleges (See table 7.7). The number of disciplines/courses and seats are limited and inadequate at the postgraduate level. Himachal is, however, the first state in the country to announce free education for girls from the academic year 1995-96 at all levels, i.e., from the time of enrolment in a government school till university education, including professional and technical courses.

TABLE 7.18

District-wise Distribution of Degree Colleges in Rural and Urban Areas of Himachal Pradesh

Districts	Degree College		
	Rural	Urban	Total
Bilaspur	01	03	04
Chamba	01	02	03
Hamirpur	01	06	07
Kangra	05	09	14
Kinnaur	01	—	01
Kullu	—	02	02
Lahaul & Spiti	01	—	01
Mandi	02	05	07
Shimla	03	07	10
Sirmaur	—	04	04
Solan	—	04	04
Una	02	05	07
Himachal Pradesh	17	47	64

Source: Education Department, Himachal Pradesh, 2001.

Note: An area having the corporation or committee has been defined as 'urban' and an area having a panchayat is defined as 'rural'.

Table 7.18 shows that out of 64 colleges in 2001, only 17 degree colleges catered to the needs of 90.21 per cent of the rural population, while there were 47 such colleges for the urban population, which constitutes only 9.79 per cent of the total. This is an expression of imbalanced institutional growth at the higher level. Government intervention is, therefore, necessary to bring education to the door-steps even in the rural areas.

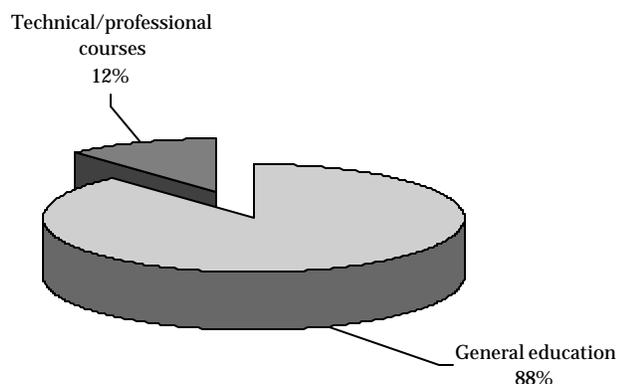
TABLE 7.19
Enrolment According to Faculty and Stage at Higher Level

	Total	Female	Male
General Education			
(B.A., B.Sc. B.Com/M.A/M.Sc/M.Com/ M.Com/ Research/ Diploma/Certificate)	32309 (88.4)	9237	23072
Professional/Technical Courses			
Engineering	960	—	—
Medicine	1153	282	871
Agriculture	1019	61	958
Vet Science	—	—	—
Law	577	92	485
Others	544	323	221
Sub-total	4253 (11.6)	—	—
Grand Total	36562 (100.0)	—	—

Source: CSO, Ministry of Statistics and Programme Implementation, GoI, 2002

FIGURE 7.3

Enrolment According to Courses



Source: CSO, Ministry of Statistics and Programme Implementation, GoI, 2002.

The available data reveal an imbalance between the development of general and technical/professional

education, as evident from the majority of the students taking admission at the higher level in general courses and only a minuscule number going in for professional education. At the 10+2 level, only two per cent opted for vocational courses, 14 per cent for science, 5.57 per cent for commerce and the remaining 78 per cent joined art courses, according to the Sixth All-India Educational Survey, 1999. In March 2003, the number of persons registered with employment exchanges was nearing 9.5 lakh out of which 29,000 were postgraduates and 80,000 were graduates.

It is, therefore, important that vocational courses are enriched and diversified. It is extremely important to lay stress on enrolment in the vocational stream at the 10+2 level itself, to enable the students find gainful employment or be self-employed at the later stage of life. A survey should be undertaken in order to identify region-specific courses, so as to diversify the options for students for vocational stream, such as tourism, hotel management, horticulture, adventure sports, etc.

Technical Education

The major conclusions that emerge from the overview of general education are the high drop-out rate and low enrolment at higher levels of education, and also the tendency to opt for general courses at the higher education stage. There is very low dispersal of students to different streams of education. In the development perspective specific to Himachal Pradesh, suitable human resources have to be created to harness the available natural resources, the vast hydel potential and to manage the industries in the state. Manpower has to be converted into human resource. Hence the importance of having a critical look at technical education in Himachal Pradesh.

Table 7.20 indicates the existence of a gap between the skill-types being produced and the demand for them in the market. The market is flooded with persons trained in unwanted skills. There is considerable

TABLE 7.20
Annual Absorption of Engineers in Relation to Total Availability (Diploma)

Year	Automobile		Civil		Electrical		Mechanical	
	Availability	Demand	Availability	Demand	Availability	Demand	Availability	Demand
1991	17	9 (52.9)	122	49 (40.16)	154	42 (27.3)	66	23 (34.8)
1992	18	10 (55.5)	123	50 (40.6)	167	47 (28.1)	58	21 (36.2)
1993	13	8 (61.5)	116	49 (42.2)	169	50 (29.6)	51	22 (43.1)

Source: Technical Manpower Profile, 1995.

TABLE 7.21
Number of Institutions and Intake Capacity of Technical Institutions

Level of Programme	Institutions		Sanctioned Annual Intake		Student Enrolment in the Year 2002-03		No. of Courses
	Govt.	Self-financing	Govt.	Self-financing	Govt.	Self-financing	
Degree	—	3	—	460	—	400	7
Diploma	7	—	820	—	560	—	11
Certificate Course	52	5	4000	276	3310	—	36

Source: Department of Technical Education, H.P., 2002.

surplus of engineers in the market. It is necessary to bridge the gap between the demand and supply by training manpower in courses required by the industry and suitable to the local requirement. Education should form an integral part of planning, in which the development of human resources is related to the overall strategy of economic and social transformation.

Besides reflecting on the present status of technical education, an effort has, therefore, been made in the present section, to suggest ways and means to expand technical education in the state, both quantitatively and qualitatively, so that the courses are tuned to local requirements, thus encouraging more students to join technical education to become self-reliant and have wider options for jobs. Both secondary and empirical data have been used to write this section on technical education. Primary data were collected from the principals, teachers, students and other technical personnel in the various engineering colleges, polytechnics, ITIs and the Directorate of Technical Education.

The data reveal that the outlay on technical education increased the maximum during the Seventh Five Year Plan (12.7%) and the Eighth Plan (14.78%) and decreased during the Ninth Plan to only 4.75 per cent.

At present, the state imparts technical education at all levels — degree, technician and craftsman — through different institutions. The details are given in Table 7.21.

Engineering (Degree level)

In Himachal, there are three degree-level institutions. Recently, the centre has upgraded the Regional Engineering College at Hamirpur to National Institute of Technology under the Ministry of Human Resource Development. All those engaged in the developmental process of the new digital economy are building up information technology in Himachal, for integrated

participation. The Jai Prakash Institution is a world-class institute of IT at Vakanaghat in Solan district, about 22 km from Shimla.

TABLE 7.22
Details of Courses Offered

Name of the Institutions	Courses Offered
N.I.T. Hamirpur	Civil, Electrical, Mechanical, Electronics & Communication, Computer Science and Architecture
I.I.T.T. College of Engg. Kala Amb	Electrical, Electronics & Communication, Computer Science and Engineering
Institute of Engineering and Emerging Technology, Baddi (2002)	Electrical, Electronics & Communication, Mechanical, Computer Science and Information Technology
Green Hill Engineering College, Kumar Hatti, Solan, H.P.	Electronics and Communication, Electrical, Mechanical, Computer Science and Engineering

Source: Department of Technical Education, H.P., 2002.

The field survey revealed that at the degree level, the number of institutes is adequate.

Courses are offered in seven disciplines at the degree level — civil, electrical and mechanical engineering, electronics and communication engineering, architecture, computer science engineering and information technology. Electrical, electronics and communication, computer science and engineering are taught in all colleges. The field survey shows that the majority of the respondents feel that the number of courses offered is not only inadequate but also of low relevance. This policy calls for review or reframing of courses to meet the demands of the present-day world so that more and more children could be diverted towards technical education. The data in Table 7.23 give details of the courses to be given priority and added as demanded by the technical department authorities, teachers and students.

TABLE 7.23
**Branches to be Given Priority and
 Added at the Degree Level**

<i>Branch/Course to be given Priority</i>	<i>Branch/Course to be Added</i>
Electronics and Communication Computer Engineering Mechanical	Instrumentation Engineering Chemical Engineering Environmental Engineering Production Engineering Automobile Engineering Bio-technology Textile Technology

Source: Field Survey, CRRID, 2002.

The majority of the respondents in the field survey wanted the focus at the degree level to be on mechanical, electronics and communication and computer engineering.

The empirical data also revealed that majority of the respondents wanted civil engineering to be completely scrapped off. However, keeping in view the needs of the development of the vast hydro potential available in the state, it is felt that civil engineers would be required. Hence, the course should not be scrapped off but its intake should be limited. Hydrology as a part of civil and electrical engineering should be retained and encouraged, particularly to meet the needs of the power projects. Also courses in civil engineering should be modified to consist of construction in earthquake-prone areas.

The respondents further felt that the scope for diversification was very wide, keeping the local demand in view. According to them additional courses, such as instrumentation engineering, chemical engineering, production engineering, environmental engineering, automobile engineering, textile technology and biotechnology should also be introduced at the degree level.

People in Himachal still have a craze for government jobs for security reasons and fear to venture out to start their own enterprise. The scope for government jobs has, however, narrowed. Industry has not flourished in Himachal Pradesh. Also the market does not require the kind of industrial training they are given. This mismatch inhibits self-employment. They are also afraid of being unable to repay the loans. It is necessary to take urgent steps to harness the vast human potential which Himachal has, by reducing the gap between demand and supply of trained manpower and changing the mindset of the people so that they feel more confident to start their own enterprise.

Because of its wealth of plants and a neat and clean environment, Himachal has good scope for the development of biotechnology industries. It can focus on the optimal management of its forest vegetation, along with diversification of farming for value addition to fruits, vegetables, and flowers. There is a large potential for biotech products and trade in biopharmaceuticals and agriculture-based food products, both for the domestic market and export. Hence, there is full justification for a biotechnology course to be added to the engineering syllabus, to train the manpower for tapping the potential of this industry. The majority of the respondents in the field survey specifically suggested that this particular branch of study should be added.

Similarly, the state has 21,000 MW of hydel power potential and only 30 per cent of it has been harnessed so far. Exploitation of the huge unutilised potential would require setting up many large, mini and micro hydel power plants. This would call for a large human resource with skills to use new knowledge-based tools in the power sector.

Environmental engineering courses should also be introduced. There is a good potential for non-polluting and environment-friendly industries in Himachal. Its realisation calls for training of technical manpower in precision engineering at both degree and diploma level, involving such courses as watch making, perfume making and winery. Industries and courses dealing with herbal medicines and herbal cosmetics could also be encouraged. Tourism, horticulture, sheep and goat rearing are the other potential areas, which need to be tapped. There should be orientation towards hill topography and so a course on Hill Architecture should be started. There is of course a need for studies and surveys to determine the actual potential of the courses identified so that they could be introduced as per their priority in the state of Himachal.

Polytechnics

There are seven diploma institutions, all run by government, providing technical education in the state.

The courses offered in the polytechnics cover 11 disciplines at the diploma level — civil, electrical, mechanical, and instrumentation engineering, information technology, automobile, architecture assistantship, computer engineering, pharmacy, electronics and communication engineering and modern office practice.

The maximum number of polytechnics provide courses in computer engineering (5) and electronics

and communication engineering (3). Two polytechnics provide courses in civil, electrical and mechanical engineering, pharmacy and modern office practice. Only the Government Polytechnic College, Sundernagar, conducts a course in automobile engineering. Further, there is provision for instrumentation engineering in only one polytechnic.

TABLE 7.24

Details of Courses being Offered

<i>Name of the Institutions</i>	<i>Courses being Offered</i>
Govt. Polytechnic College Sundernagar (1959)	Civil, Electrical, Mechanical, Automobile and Architecture Assistantship
Govt. Poly. College Hamirpur (1963)	Civil, Electrical, Mechanical, Information Technology and Computer Engineering
Govt. Poly. College for Women Kandaghat (1984)	Electronics & Communication, Computer, Pharmacy and Modern Office Practice
Govt. Poly. College Kangra (1992)	Electronics & Communication, Computer and Instrumentation Engineering
Govt. Poly. College Rohroo (1984)	Electronics & Communication, Pharmacy and Modern Office Practice
Govt. Poly. College Ambota (1999)	Computer Engineering and Architecture Assistantship
Govt. Poly. College Talwar (2001)	Computer Engineering

Source: Department of Technical Education, H.P., 2002.

The Government Polytechnic Colleges at Hamirpur and Kandaghat have introduced a diploma course in information technology and computer science and engineering. Government Polytechnic, Sundernagar has been upgraded as Institute for Physically Disabled persons. Polytechnic College Sundernagar has the capacity of running diploma and degree courses keeping in view their infrastructure strengthened with the World Bank Assistance.

Table 7.25, based on the empirical data collected, shows the type of courses to be given priority/added in polytechnics.

Majority of the polytechnic Officers/Principals/Students strongly recommended that the main focus should continue to be on branches such as mechanical, information technology, electronics and computer engineering, instrumentation, electronics and communication, pharmacy and automobile engineering. The new areas they recommended were fashion designing, chemical engineering, biotech courses, repair and maintenance, hotel management, textile technology, production engineering, garment technology, food products and processing, precision engineering, interior decoration, plastic technology,

metallurgy, paper technology (including waste-paper recycling), rain-water utilisation and advanced course in refrigeration and airconditioning.

TABLE 7.25

Branches to the Given Priority/Added in Polytechnics

<i>Branch/Course to be Given Priority</i>	<i>Branch/Course to be Added</i>
Mechanical Engineering	Fashion Designing
IT	Chemical Engineering
Electronics	Biotech Courses
Computer Engineering	Textile Technology
Instrumentation Technology	Repair and Maintenance-Advance Course
Electronics and Communication	Production Engineering
Pharmacy	Hotel Management
Automobile Engineering	Garment Technology
	Food Processing
	Food Products
	Precision Engineering
	Interior Decoration
	Plastic Technology
	CNC Training
	Metallurgy
	Hybrid AC/DC High Voltage Transmission Courses
	Rain Water Utilisation
	Paper Technology
	Advanced Course in Ref. & AC

Source: Field Study, CRRID, 2002.

Note: The courses have been listed as per the priority indicated by the respondents.

The respondents wanted civil engineering and modern office practice to be scrapped off, because according to them these branches offered no employment opportunities in either the public or the private sector. However, it is felt that the civil engineering diploma course should not be completely scrapped off, but its intake capacity limited. It is further recommended that in the near future, the course on modern office practice, at present with seven teachers and one student should be closed.

Industrial Training Institutes (ITIs)

At present, there are 52 industrial training institutes in the state, including one for the physically handicapped, which has been established in Sundernagar, and 16 ITIs for women, apart from four in the private sector and one for motor drivers in the Heavy Earth Moving Machinery Operators School in Amb.

Out of the 100 ITIs selected by the Government of India for information technology and the electronics

system maintenance trade, three are in Himachal, at Shahpur, Mandi and Nahan.

The ITIs are being equipped with the latest equipment and technical infrastructure under the World Bank aided Skill Development project at a cost of Rs. 8.13 crore, as a centrally sponsored scheme. The World Bank assisted project for strengthening technical education amounting to Rs. 45.75 crore has been completed successfully.

A Rs. 23.75 crore project has been submitted to the Government of India for seeking assistance from the World Bank under the Vocational Training Programme (Phase-II). So far, the National Open School has given accreditation to 15 ITIs and one polytechnic college to help provide vocational training through distant education.

Craftsmen Training Schemes involve training in:

1. Industrial Training Institutes
2. Industrial Training Institutes for Women
3. Industrial Training Institutes for Physically Handicapped

TABLE 7.26

Details of ITIs

ITI – Co-educational	33	Bilaspur, Chamba, Jubbal, Mandi, Nahan, Nalagarh, Nadaun, Rampur, Neharn-pukhar, Paonta Sahib, Reckong-pee, Shimla, Solan, Shamshi, Shahpur, Una, Nurpur Jogindernagar, Paplog, Bagsaid, Rajgarh, Berthi, Bhoranj Karsog, Udaipur & Saliana Shilai, Sainj, Bani, Dhameta, Kuamsain, Bangana
ITI for Physically Handicapped	1	Sundarnagar
ITI for Women	16	Dharamshala, Palampur, Shimla, Nahan, Reckongpee, Bilaspur, Nalagarh, Mandi, Kullu, Una, Hamirur, Chamba, Deegal, Kausali, Chopal & Jawali.
Motor Drawing and Heavy Earth Moving Machine Operator Training Scheme	1	Amb
ITCs Under Private Sector	4	Pragpur, Luhari, Parwanoo, & J.P. ITC Samirpur
VTC under SCVT Scheme	1	Matu Private UTC Nurpur
Food Craft Centre under SCVT Scheme	1	Hamirpur

Source: Department of Technical Education, HP, 2002.

Note: Five Food Craft Institutions and 15 Para Medical Training Centres have also started working in the year 2003.

Available data indicate that the most common trades taught at most of the ITIs in Himachal were electrician, motor vehicle mechanic, welder, fitter, COPA, draftsman,

carpenter and electronic mechanic. Trades which were found in only one or two ITIs were mason, bleach dye and printing, stenography, tractor mechanic, fruit and vegetable processing, pump mechanic, instrument mechanic, weaving of woollen fabrics, watch and clock repairer, upholstery, diesel mechanic, plastic processing operator and sheet metal, refrigerator and airconditioner.

All women's ITIs, except one, provide training in embroidery and needlework and cutting and tailoring. It might be worthwhile considering a wider range of courses for women including interior decoration, beautician, music and dance, handloom and handicrafts, herbal cosmetics, sculpture-making and weaving of woollen fabrics.

Most of the ITIs in the private sector conduct courses for electrician, COPA, cutting and tailoring, embroidery and needlework.

The primary data collected revealed that the majority of the respondents felt that the number of courses offered at the ITIs were not only inadequate but also of low relevance. Table 7.27 provides information on the branches that could be added/given priority.

TABLE 7.27

Branches to be given Priority/Added in ITIs

<i>Branch/Course to be given Priority</i>	<i>Branch/Course to be Added</i>
IT Based Courses - Computer Application and Data Processing, Programming, Computer Operator	Garment Manufacturing/Textile
Mechanical Motor Mechanic	Fashion Designing
Electrician	Maintenance of Electrical and Electronic Machinery and Appliances
Motor Driving Trade	Beautician
Welder	Floriculture
Fitter, Tractor Mechanic	Horticulture
Diesel Mechanic	Painting and Polishing
Dress Making and Cutting/Embroidery	Agricultural Equipment
Mechanical and Construction Engineering	Fabric Printing
Carpenter	Electro Plating
Turner	Woodwork/Wood Carving
Refrigeration and AC	Cinematography
Plumber	Hosiery
Electronic Mechanic	Leather Trade
Para Medical Courses	Cement
Foods Craftsman	
Cutting & Tailoring	

Source: Field Study, CRRID, 2002.

Note: The courses have been listed according to the priority indicated by the respondents.

The empirical data revealed that the majority of the respondents felt that courses as information technology, motor mechanic, electrician, motor driving, welder, computer trades, computer education and data processing, fitter, tractor mechanic, diesel mechanic, dress making and cutting/embroidery, mechanical and construction engineering, carpenter, turner, refrigeration and AC, plumber, etc., should be given priority and further expanded.

The empirical data also suggest the need to introduce such new craftsman trades as garment manufacturing/textile, fashion designing, maintenance of machinery, beautician, floriculture, horticulture, painting and polishing, fabric painting, hosiery, wood-work and leather trade. The respondents felt that such training would help them run their own private workshops. All trades are very useful for self-employment.

The respondents were rather doubtful about the value of training in such trades as stenography, in both English and Hindi, and secretarial practice, as they were outdated and had no job opportunities. The respondents felt that the number of seats in these courses should be reduced and eventually they should be totally scrapped off or if these courses have to be retained then they should be modified and their scope widened to include computer training. It is also pointed that even the trade Hair and Skin Care is also not very popular.

Majority of the Small-Scale Units and Tiny Industries in Himachal Pradesh (75%) relate to food and allied products, hosiery, mechanical, wood and wood products, chemical, leather and leather products. 85 per cent of the Large and Medium Scale Industry relate to food products, textiles, chemical, paper and paper products, steel, plastic, electronics, precision and mechanical engineering. Hence there is full justification for the manpower to be trained in the new courses identified by the field study. If need be, the potential of these courses could be again determined by undertaking a detailed study or survey in the State of Himachal Pradesh.

Achievements in Education

- The literacy rate of Himachal Pradesh has increased tremendously in the past.
- Himachal Pradesh ranks 11th when compared to other states and UTs in India.
- Female literacy has grown rapidly in the last decade.
- There has been a quantitative expansion of educational institutions in Himachal Pradesh. The state has almost achieved the prescribed norm of having a primary school at a distance of one kilometer in all the districts except for some scattered habitations in some districts.
- The state has also achieved gender equity in terms of enrolment of students at primary level.
- The age-specific enrolment ratio in Himachal Pradesh is quite high. In fact it is much higher than the national figure and those in Punjab and Haryana.
- Himachal Pradesh has achieved nearly 99 per cent retention rate at the primary level.
- The state is spending a very high proportion of GSDP on education. Allocation of resources in education in Himachal Pradesh is much higher than in Punjab, Haryana, Kerala and at the all-India level.
- The teacher-pupil ratio in educational institutions in Himachal Pradesh is fairly adequate.
- The field survey revealed that at the degree and diploma levels of technical education, the number of institutes is adequate.

Areas of Concern

- In spite of relatively faster attainment of female literacy, the gap between male and female literacy is still very high.
- The rural-urban differences are very high among females. The literacy rate of rural women in the districts of Chamba, Sirmaur and Kullu needs special intervention, as nearly half the women in these districts are totally illiterate.
- Though the literacy rate is quite high, most of the literates have studied up to primary or lower levels. Very few children go in for higher education.
- Though there is gender equity in enrolment at primary level, the gap between male and female enrolment is quite high at higher secondary level.
- There are 1336 single-teacher primary schools and nearly 25 per cent of the primary school teachers are untrained. This is adversely affecting the quality of education.
- The drop-out rate among Scheduled Castes and girls is very high, as they move to higher levels of education.

- The pass percentage of students at the matriculation and the 10+2 levels is very low.
- There is total lack of infrastructure facilities in the schools of Himachal Pradesh.
- Quality of education imparted in schools is poor. There is need for revamping curriculum, teaching methods and examination system.
- The number of courses offered in technical institutions is not only inadequate but their relevance is also low.
- At higher levels of education, problems like imbalanced and unplanned institutional growth in rural and urban areas and gap between general and professional courses have affected the quality of higher education resulting in a gap between human resources being produced and the demand for them in the market.

Recommendations

- **Increase retention among Scheduled Castes and girls at higher levels:** The economic incentives being provided should be used to ensure the arrest of the social and cultural handicaps of enrolment and retention of SCs/girls. NGOs and Panchayat Raj Institutions need to be associated with an effective effort to initiate an attitudinal change in parents of girl children and SCs (especially in rural areas) in the districts of Chamba, Sirmaur and Kullu, to let their children continue with their studies up to the higher levels. The role of MTAs, especially for creating awareness among girls should be strengthened.
- **Focus on pre-service/in-service teachers' training:** Efforts should be made to ensure that there are adequate trained, qualified teachers who are deployed rationally at all levels. Although orientation courses for teachers have already started, there should be more emphasis on these, so that the teachers are themselves trained with the most modern teaching methods. Such teachers should also be given post-recruitment training. Further, the in-service teachers' programme should be organised and teachers should be compulsorily deputed for refresher courses. In fact, teachers' training should be linked to their promotion. In-service teachers training programmes should be constantly reviewed and strengthened. There should be co-ordination between DIETs and SCERTs. It is essential that

SCERT should act as a key agency in the state for the professional development of teachers at school level and DIET teachers. In fact DIET and all research and training should be brought under the umbrella of SCERT.

Although the Department of Education provides for in-service training to technical/vocational teachers and the teachers are sent on short-term and long-term training programmes in their respective disciplines, it is felt that such programmes should be strengthened for updating the knowledge and skills of the teachers to keep pace with developments and change in the IT sector. The faculty should be strengthened through modernised workshops and advanced courses. The Technical Teachers Training Institute should draw up programmes for training polytechnic teachers in the new diversified areas.

Instructors do not have adequate knowledge to operate modern equipment, wherever they might have been introduced. Hence, it is important to upgrade their working knowledge in this area.

- **Revamp the curriculum:** A special thrust is necessary to make education at elementary level useful and relevant for the children. At present, it is highly regimented with uniform courses. The state has been blindly following the national curriculum without considering the special conditions at the grassroot level of Himachal Pradesh. Hence modernisation of the syllabus with more flexibility in the choice of subjects is recommended. The curriculum framework should be based on a combination of compulsory and flexible subjects, giving the children a choice to opt for subjects of their interest. It is recommended that subjects that do not have practical value in day-to-day life should be made optional. There should really be a continuing review of the utility of the curriculum. Further, there is need to emphasise moral values and iterate their importance in everyday life.

The curriculum should be framed at the state-level, taking into consideration the state-specific requirements, their vocational needs, opportunities for self-employment and the requirements of the employing agencies. Vocational education and training has to be strengthened. It is imperative that the students are trained in only such occupational areas wherein self- or wage-employment opportunities are assured.

Government should conduct labour market surveys from time to time, to work out need-based programmes and remove obsolete courses.

While redesigning the syllabus, it is important that due priority is given to the 29 items clubbed in five clusters in the 73rd Amendment Act, i.e. agriculture, rural industrialisation, infrastructure development, human development and social welfare/gender development.

- **Training of the trainers:** The government has decided to devolve powers and responsibilities to the PRIs. At present there are 26,532 elected representatives of PRIs and about 430 of ULBs in Himachal Pradesh.

Education is one of the 29 subjects specified in the 73rd amendment to be shifted to PRIs. In this context it is very important to initiate training of the trainers and elected representatives. In fact there should be ongoing training of the *sarpanches* and *panches* so that the trained representatives link the system of education with management and move from training to implementation.

- **Provision of infrastructure:** Efforts must be made to bridge infrastructure gaps. Schools should also raise resources from voluntary organisations and *Panchayats*, with the state government contributing matching grants. A low-cost strategy has to be evolved for providing toilet facilities in educational institutions at all levels. The local community, in co-ordination with the government and the PRIs, should raise resources to provide all local schools with potable drinking water.
- **Ban homework** till the Kindergarten level and reduce it at the elementary level.
- **Decentralisation and community participation:** The state government should take effective steps to encourage transfer of elementary educational institutions to the PRIs and urban local bodies, in order to empower the community and other stakeholders. It is essential that the control of schools and teachers should be transferred to local bodies. Efforts should be made to involve the community in the development of education. In Himachal Pradesh, some powers have been devolved to PRIs, since 1996, for the inspection of primary schools, maintenance/repair of primary school buildings and monitoring the various incentive schemes. *Gram Vidya Upasaks* in primary schools have been made employees of *Gram Panchayats*. By

ensuring the appointment of para teachers by *Gram Panchayats*, the state can move towards a situation where the local community appoints all teachers. Decentralisation will, however, be actually achieved only when the *panchayats*, VEDCs and UEDCs become fully autonomous to plan, manage and control school affairs, with full financial powers. It is also important to enlarge and strengthen the role and participation of PTAs/MTAs, especially for girls in schools. MTAs are already operative in the State. Their role should be widened to counselling and adolescent education, etc.

- **Motivate students to continue education up to higher levels and join technical/professional courses:** More boys and girls should be encouraged to continue up to higher levels and join technical and professional courses. Guidance cells, awareness and motivation programmes should be organised in schools/colleges to provide them with information about various opportunities and branches available, which could open up very satisfying careers for them in future in areas of their interest.
- **Introduction of new courses in existing engineering colleges/polytechnics/ITIs and the removal of the obsolete ones:** In order to bring about an improvement in job opportunities for vocational and technical students, it is essential that a prior assessment of locally available and emerging occupations should be made and such courses should be offered to students as will come under the purview of these occupations. The new courses, suggested by the empirical data in the present chapter should be studied and rationalised and then introduced and the obsolete ones should be removed.
- **To make technical education more effective, syllabus should be redesigned with more emphasis on practical work than theory.**
- **Promote interaction between industry and institutions:** There is a need for closer industry-institute interface to improve quality and productivity of industry and increase employability of the students passing out from the Industrial Training Institutes. Although government is taking steps to promote interaction between industry and institutions, through good representation of industry in the managing committees of educational institutions, the empirical data reveal that so far there has only been formal paper correspondence between industry and technical

training institutions. The interaction is limited only to factory visits during training.

To reduce the mismatch between the demand and supply of skilled manpower, it is imperative that there is participation of industry in curriculum designing itself so that courses are framed according to the local need and requirement of the industry. Technical training institutes should have a cell, where people are guided to set up their own enterprises. For this, instructors should be invited from the industry to participate in such programmes. Experts should be invited from industry to deliver special lectures on selected topics in ITIs/polytechnics. At least three-month in-plant industrial training should be provided for all the engineering trades, to make the trainees familiar with the industrial environment. Seminars should be regularly organised to create awareness of modern technology among students. Educational tours and training in industries should be made compulsory and the period for such training increased. Experts from industries could be involved for maintenance of machinery and equipment at technical training institutes. Educational institutions could also arrange courses to update the knowledge of practising engineers.

These objectives will be facilitated if the Institute Managing Committees (IMCs) are empowered. Such initiative was undertaken by DGET and CII, which proposed to constitute a separate IMC for each ITI having representation of Industry, State Directorates, Principal of ITI, senior faculty member of ITI, student representatives, District Employment officer etc. ITI Solan from Himachal Pradesh was also selected as part of pilot project. The role and responsibility of IMCs included generation and utilisation of resources, students selection, examination supervision, faculty evaluation, teaching aids, MIS system, placement, faculty and staff development, equipment maintenance, curriculum revamping, transfer of faculty etc. The steering committee was also formed to monitor the performance of IMCs. Formation of such IMCs needs to be strengthened in Himachal Pradesh.

- **Monitoring placement of students:** Placement cells should be opened and strengthened in every institute and tracer studies should be carried out regularly on placement of students passing out of the training institutes.

- **Guidance:** A cell or guidance bureau should be set up for the proper guidance and counselling of the students about the various subjects/trades, so that they can seek admissions in courses suited to their aptitude and interests. Final year trainees should also be provided proper guidance about job opportunities and guidelines for higher studies. The teachers should also be made aware of the various options available during their refresher/orientation courses, so that they pass the information on to the students in class.
- **Upgradation of polytechnics and ITIs:** The empirical data clearly bring out the fact that the present number of technical institutions is adequate. The respondents stressed the importance of improving the quality of the existing institutes and upgrading a few of them where trades/courses/disciplines as per the need of hour could be introduced so that the low percentage of admission seekers in technical/professional education could be increased. Government should upgrade the Government Polytechnics at Sunder Nagar pending any future plan to open a new engineering college in the state as it has the capacity of running both degree and diploma courses.

The major drawback of technical education in Himachal Pradesh, as pointed out by majority of the respondents, is the lack of industries. Polytechnics and ITIs are far away from the industrial belt. If ever government proposes to open more Institutes, then they should be in industrial hub. Paonta Sahib in Sirmour district or Baddi in Solan district were suggested for polytechnics.

- **Provision of funds for maintenance and repair of machinery:** The current government allocation for technical education is Rs. 1,786.01 lakh. Funds provided under the World Bank assisted project are being utilised to meet the shortage of equipment in the technical institutions. There is, however, no money demarcated for repair and maintenance. It is suggested that five per cent of the cost of machinery be made available for their maintenance and repair. There is a very strong recommendation for starting new courses on maintenance of machinery in the polytechnics and ITIs.
- **Pooling of resources:** AICTE should be approached to consider allowing pooling of resources-faculty, library, and lab by technical institutions situated at the station.

- **Change procedure for admissions in professional and technical institutions:** No weightage is given to marks obtained in 10+2 examination. During the 10+1 and 10+2 stages students hardly attend any classes in their colleges/schools. On the other hand, almost all of them take tuitions and prepare for various entrance tests. Students have lost the habit of attending classes, or doing practicals, etc. A very strong recommendation has emerged from the empirical data that some kind of weightage should be given to the marks attained at 10+2 level, for admission to professional, technical and other institutes
- **Monitoring and evaluation:** An institutionalised mechanism for regular inspection and monitoring and follow-up needs to be established. An appraisal of teachers and heads must be initiated. At least one inspection per year from the Directorate of Technical Education in the Training Institutes is a must.

Conclusion

It is gratifying to note that Himachal Government is giving priority to the education sector and is spending a very high proportion of GSDP on education. Literacy and enrolment have improved considerably. At the time of independence, with only eight per cent literates, Himachal Pradesh had the lowest literacy level in India. The literacy rate however improved steadily and increased to 77 per cent in 2001 and today H.P. ranks 11th among all the states and UTs in India. Himachal Pradesh has also reduced its drop-out rates tremendously up to the elementary level which is a remarkable achievement.

Himachal Pradesh government should however frame an education policy of its own to target improving the quality of education imparted in the state which is directly linked to the teaching community, which needs to be made more accountable and effectively trained. The curriculum should be framed taking into consideration the state specific requirements, their vocational needs, opportunities for self-employment and the requirements of the employing agencies. The state has to broadly follow the syllabi prepared by the NCERT but it should revamp the curriculum to increase its local content/context. An earnest endeavor has also to be made by the state of Himachal Pradesh to provide adequate buildings and necessary infrastructure to all government educational institutions. The state government needs to take

effective steps to encourage transfer of elementary educational institutes to PRIs and urban local bodies, in order to empower the community. The state government should also give priority to providing accessibility to educational institutions keeping its own hilly terrain in mind. To curb the problem of high drop-outs at the higher levels of education and to reduce the gap in enrolment between general and technical courses, there is need to diversify students to different streams of education. So stress has to be laid on vocational education at the 10+2 level itself and the courses need to be enriched and diversified so that students find gainful employment at later stages of life. In the development perspective specific to Himachal Pradesh, suitable human resource has to be created to harness the available natural resources, the vast hydel potential, tourism and to manage industries in the State. There is also a need for training technical manpower in non-polluting and eco-friendly industries, herbal medicines and herbal cosmetics. There is also need to promote interaction between industry and technical institutes in Himachal Pradesh.

Himachal Pradesh has been adhering till date to the National Policy of Education. Although Himachal Pradesh has taken the initiative to provide free education to girls at all levels, it now needs to move ahead to formulate its own 'Education Policy' with priority to its specificities highlighted above.

References

- Cranney Brenda (2001), *Livelihood and Environment, Local Environment and Lived Experience, The Mountain Women of Himachal Pradesh*, Sage Publications, New Delhi.
- Department of Planning, *Five Year Plans*, Government of Himachal Pradesh, Himachal Pradesh.
- Directorate of Census Operations (2001), *Census of India, Provisional Population Totals, Paper 1 & 2, Series 4*, Himachal Pradesh.
- Directorate of Economic and Statistics (1997), *Statistical Abstract of Himachal Pradesh*, Himachal Pradesh.
- Directorate of Economic and Statistics (2002), *Economic Survey of Himachal Pradesh*, Himachal Pradesh.
- Directorate of Economic and Statistics (2002), *Statistical Abstract of India*, Government of India.
- Directorate of Technical Education (2002), *Vocational and Industrial Training, Concept Paper For Technical Education Quality Improvement Project*, Himachal Pradesh, Sundernagar, 2002.
- Directorate of Technical Education (2002), *Vocational and Industrial Training, Perspective Plan for Improvement of Technical Education in Himachal Pradesh*, Himachal Pradesh, Sundernagar.
- Directorate of Technical Education (2002), *Vocational and Industrial Training, Status of Technical Education, in the State of Himachal Pradesh*, Himachal Pradesh, Sunder Nagar.
- Himachal Pradesh, *Human Development Report, 2001*.
- ICDEOL, Lohumi, Manju (1996), *Development of Tertiary Education in Himachal Pradesh*, Himachal Pradesh University.
- Institute of Applied Manpower Research (1995), *Technical Manpower Profile*, New Delhi.

Ministry of Education (1985), *Challenge of Education 1985, A Policy Perspective*, Government of India, New Delhi.

Ministry of Human Resource Development (1986), Government of India, *National Policy on Education, Programme of Action*, New Delhi.

Ministry of Human Resource Development (2001), *Manpower Profile*, India Year Book.

Ministry of Human Resource Development (1998), *Selected Educational Statistics*, Government of India, New Delhi.

National Council of Applied Economic Research (NCAER) (1999), *India Human Development Report*, New Delhi.

National Council of Educational Research and Training (NCERT) (1999), *Sixth All India Education Survey, Main Report*.

Planning Commission (2001), *National Human Development Report*, Government of India.

State Council for Educational Research and Training (SCERT) (2001), *Status, Issues and Future Perspectives*, Government of Himachal Pradesh, Solan.