Chapter 11

EDUCATION

Education is a core sector for achieving the objective of employment, human resource development and bringing about much needed change in social environment, leading to overall progress through efficient use of resources. An appropriate education system cultivates knowledge, skill, positive attitude, awareness and sense of responsibility towards rights and duties and imparts inner strength to face oppression, humiliation and inequality. (*Ninth Five Year Plan*, *1997-2002)*

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

LITERACY

A person who is able to read and write with understanding in any language is recorded as literate. Literacy is the best possible barometer to judge the level of educational awakening in a state, leading to a minimum capacity for self-learning. In Punjab, the literacy rate has been rising. It was 58.51 per cent in 1991 and increased to 69.95 per cent in 2001, an increase of 11.44 per cent points during the last 10 years.

Table 1
Literacy Rate, Punjab (1991-2001)

Years	Rural	Urban	Total	Male	Female
1991	52.77	72.08	58.51	65.66	50.41
2001	65.16	79.13	69.95	75.63	63.55

Source: *Census of India (Punjab), 1991-2001*
Note: Literacy rate have been worked out by excluding 0- 6 age-group

Punjab has fared well in reducing the gap between male and female literacy, which decreased from 15.25 per cent in 1991 to 12.08 per cent in 2001. Male literacy rate increased from 65.66 per cent in 1991 to 75.63 per cent in 2001 and female literacy rate from 50.4 per cent to 63.55 per cent. Female literacy rate has increased by 13.14 per cent points and male literacy by only 9.97 per cent points during the last decade. Female literacy rate in Punjab is also considerably higher than that of India where 54.16 per cent of the females are literate.

According to the 2001 Census, rural literacy rate is 65.16 per cent and urban 79.13 per cent signifying that the gap is not very wide. There has been a reduction in the rural-urban literacy gap, from 19.31 per cent points in 1991 to 13.97 per cent points in 2001. In spite of these positive trends, there are still 94.35 lakh (including 0-6 population) illiterate in the state (*Census of India, 2001*). It is also a matter of great concern that in spite of having improved its literacy rate figure, the rank of Punjab went down from the 12th position in 1971 to the 16th in 2001, when compared to other states and UTs in India. At present, Kerala has the highest literacy rate of 90.92 per cent while Bihar has the lowest of 47.53 per cent.

Table 2
States and Union Territories Ranked by Literacy Rate – India 2001

States/UTs	Literacy Rate	Rank by Literacy Rate
India	**65.38**	
Kerala	90.92	1
Mizoram	88.49	2
Lakshadweep	87.52	3
Goa	82.32	4
Delhi	81.82	5
Chandigarh	81.76	6
Pondicherry	81.49	7
Andaman & Nicobar Island	81.18	8
Daman & Diu	81.09	9
Maharashtra	77.27	10
Himachal Prudish	77.13	11
Tripura	73.66	12
Tamil Nadu	73.47	13
Uttaranchal	72.28	14
Gujarat	69.97	15
Punjab	**69.95**	**16**
Sikkim	69.68	17
West Bengal	69.22	18
Manipur	68.87	19
Haryana	68.59	20
Nagaland	67.11	21
Karnataka	67.04	22
Chhatisgarh	65.18	23
Assam	64.28	24
Madhya Prudish	64.11	25
Orissa	63.61	26
Meghalaya	63.31	27
Andhra Prudish	61.11	28
Rajasthan	61.03	29
Dadra & Nagar Haveli	60.03	30
Uttar Prudish	57.36	31
Aruncahal Prudish	54.74	32
Jammu & Kashmir	54.46	33
Jharkhand	54.13	34
Bihar	47.53	35

Source: *Census of India, 2001*
Note: The literacy rate pertains to percentage of total literates to total population excluding 0-6 population

Further, within Punjab, district-wise data reveal wide disparity in literacy rates.

Table 3
Total Literacy and Female Literacy by Districts of Punjab, 2001

District	Literacy Rate	Female Literacy
Punjab	**69.95**	**63.55**
Hoshiarpur	81.40	75.56
Rupnagar	78.49	71.74
Jalandhar	77.91	72.93
Nawanshahr	76.86	69.52
Ludhiana	76.54	72.11
Gurdaspur	74.19	67.31
Fatehgarh Sahib	74.10	68.60
Kapurthala	73.56	67.90
Patiala	69.96	62.94
Amritsar	67.85	61.41
Moga	63.94	58.96
Faridkot	63.34	57.09
Bathinda	61.51	53.76
Firozepur	61.42	52.33
Sangrur	60.04	53.29
Muktsar	58.67	50.59
Mansa	52.50	45.07

Source: *Census of India (Punjab), 2001*

Table 3 shows that Hoshiarpur district is the most literate in the state, with a literacy rate of 81.40 per cent, followed by Rupnagar (78.49%), Jalandhar (77.91%), Nawanshahr (76.86%) and Ludhiana (76.54%). All these districts have atleast three-fourths of their population literate. On the other hand, Muktsar has a literate population of only 58.67 per cent and Mansa at the bottom only a little over one-half (52.50%). The major reason for high literacy in the Doaba region is that educational facilities started early in this area. The per square availability of primary schools is the highest in Hoshiarpur district. The high literacy rate is also the outcome of the culture and nature of work of the people in the Doaba region. The economy in this area is largely dependent on the service sector rather than primary sector.

Female literacy rate in Punjab is 63.5 per cent. It is the highest in Hoshiarpur (75.56%), the lowest in Mansa (45.07%) and just above the midway mark in Muktsar (50.5%) and Ferozepur (52.33%). Further, there are nine districts in Punjab with a lower female literacy rate than the state average. The literacy rate of the Scheduled Castes is even more dismal.

Table 4
Literacy Percentage of Scheduled Castes and Non-Scheduled Castes in Punjab, 1991

	Population	No. of Literates	Literacy % age
Total (SC + Non SC)	16975724	9932116	58.51
Male	9014582	5919225	65.66
Female	7961142	4012891	50.41
SC Population			
Total	4661746	1915554	41.09
Male	2495749	1243394	49.8
Female	2165997	672160	31.03
Non-SC Population			
Total	12313978	8016562	65.10
Male	6518833	4675831	71.7
Female	5795145	3340731	57.6

Source: *Census of India (Punjab), 1991*
Note: Literates have been worked out from total population, excluding 0-6 age-group

The literacy rate of the non-Scheduled Castes is quite high (65.10%) as compared to the Scheduled Castes (41.09%). The female literacy rate of the non-Scheduled Castes (57.6%) is almost double than that of the Scheduled Caste women (31.03%). Hence, it is obvious that the total literacy percentage of the state has been adversely affected by the Scheduled Caste population. The literacy rate of Scheduled Caste women is really pathetic in the pockets of Bathinda (12.84%), Faridkot (15.78%), Ferozepur (15.09%) and Sangrur (17.02%).

Government should, therefore, give priority consideration to improve the literacy rate of the Scheduled Castes and especially females in the identified pockets.

Adult Literacy

The adult education programme was being run under 100 per cent Centrally sponsored Rural Functional Literacy Programme and Social Education Scheme until the beginning of the nineties. After the abolition of these schemes in June 1991, the adult education programme remained neglected in the state for two to three years. It was again revived by NLMA and given a new name, Total Literacy/Post Literacy Programme.

Table 5
Adult Literacy Rate, Punjab (15+Population)

	1971	1981	1991	1998
Male	44.64	51.08	61.29	70.0
Female	24.19	32.81	43.39	55.0
Total	**35.22**	**42.57**	**52.90**	**63.0**

Source: *NSSO, 1998 and Census of India (Punjab), 1971-1991*

The data reveal that there are 37 per cent illiterates in the 15+age group. But in Punjab, state government programmes cater only to the 15-35 age group and not to the total illiterate adult population.

Table 6 gives the proportion of illiteracy in the 15-35 age group.

Table 6
Illiteracy in 15-35 Age Group in Punjab, 1971-91

Year	No. of Illiterates			Total Population			Percentage of Illiterates		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
1971	962946	1263325	2226271	2260295	1998096	4258391	42.60	63.23	52.28
1981	1141858	1421027	2562885	3108584	2754113	5862697	36.73	51.0	43.72
1991	1060874	1375295	2436169	3747468	3370848	7118316	28.31	40.90	34.22

Source: *Socio-cultural Tables, Census of India, (Punjab), 1971-91*

It may be noted that the absolute number of illiterates in the age group 15-35 increased during 1971-81 but came down during 1981-91. The percentage of illiteracy has been declining consistently both for males and females. However, it is a matter of concern that there are still 24,36,169 illiterates in this age group.

The scheme of Total Literacy was started in Punjab during 1994-95 to impart functional literacy to illiterates of the age group 15-35. This was to be implemented by the Deputy Commissioner of each district through the Zila Sakhrata Samiti.

The scheme has three phases:

1) Total Literacy Campaign 2) Post Literacy Campaign 3) Continuing Education

Total Literacy Campaign (TLC)

The objective of this campaign is to provide basic knowledge of reading, writing and numerics. All 17 districts have already been covered under TLC in Punjab. Hoshiarpur, Faridkot (including Moga and Muktsar) districts have completed this campaign.

Of the total illiterates in the 15-35 age group in 1991, during enlistment under TLC, only 20,74,679 person were identified between 1994-98 and only 55.24 per cent enrolled.

Post Literacy Campaign (PLC)

The objective of this phase is to develop basic skills amongst neoliterates. There is a book called *Post Literacy Primer* (PL-I) which is taught during this programme. Six districts, namely, Hoshiarpur, Faridkot (including Moga and Muktsar), Ropar and Nawanshehar have been covered under PLC. Hoshiarpur and Faridkot (including Moga and Muktsar) districts have already completed this programme, but it is continuing in Ropar and Nawanshehar.

Continuing Education (CE)

During the Tenth Five Year Plan, it is proposed to introduce Continuing Education (CE) to impart functional literacy to all illiterates in the age group 15-35 years. For adult learners, only Hoshiarpur district has qualified for the CE programme. However, except for some districts, the TLC programme has not functioned well. It is going on at a very very slow pace. There has been no progress for the past 2-3 years in the Patiala, Fatehgarh Sahib and Gurdaspur districts. Post-literacy campaigns need greater emphasis to ensure the realisation of the gains of TLC. Withdrawal of school teachers, lack of funds and enthusiasm at all levels of society have been reported by most of the districts as the cause of the very slow pace or failure of the programme.

It is strongly recommended that there should be regular monitoring at the state and district levels. The adult literacy programme can now be merged with SSA for effective functioning and optimal utilization of resources, as there is a very easy convergence of adult literacy programmes with EGS (Education Guarantee Scheme), AIE (Alternative Innovative Education) under SSA.

SCHOOL EDUCATION: PRIMARY, ELEMENTARY, SECONDARY AND SENIOR SECONDARY

Relevance of Schooling

'Elementary education is the most crucial stage of education spanning the first eight years of schooling and laying the foundation for the personality, attitudes, social confidence, habits, learning skills and communicating capabilities of pupils. The basic skills of reading, writing and arithmetic are acquired at this stage. Values are internalized and environmental consciousness sharpened. The crucial role of universal elementary education for strengthening the fabric of democracy, through provision of equal opportunities to all for the development of their inherent individual potential, was accepted from the very inception of our Republic in Article 45 under the Directive Principles of State Policy in the Constitution, which provides for free and compulsory education to all children until they complete the age of 14 years. This was iterated in

1968, by the Resolution on the National Policy on Education'. (*Challenge of Education, a policy perspective*, 1985)

The famous Unnikrishnan Case declared primary education a fundamental right. The 93rd Amendment added a new clause to make elementary education a fundamental right. A state subject so far, education was brought on the Concurrent List.

Secondary and Senior Secondary levels of education are also considered very essential in a child's life. Classes XI and XII give the children the choice of joining different courses, including science, commerce and mathematics to facilitate their entry into the world of work, as this stage is terminal in nature and has been considered a turning point for the child to move towards a place of work.

The present section provides an overview of the current quantitative and qualitative status of school education in Punjab, in the light of the major goals of education identified by the national policy, along with some interventions/recommendations for policy alternatives in education. The major variables, which have been described here, are: growth of institutions by levels, enrollment, retention and dropout rate, quality of school education, non-formal education and infrastructure. This section also discusses educational policy/plans and expenditure.

Problems of School Education in Punjab

Punjab is in the most unenviable position with respect to literacy and education. There has been an increase in total literacy rate by 11.4 per cent points between 1991-2001. Male literacy has improved by 9.97 per cent points, female literacy by 13.1 per cent points and rural literacy by 12 per cent points during this period. Although the absolute number of illiterates has decreased from 70.43 lakh in 1991 to 63.80 lakh in 2001 (excluding the 0-6 age-group), the number continues to be alarmingly high.

The state has universal access at the primary level. It has a significantly high ratio of primary sections. Except some remote areas/new habitations with small populations, there is a government primary school in almost every village. However, there are 61 per cent villages without a middle section. In fact, 16 per cent habitations do not have an elementary school even within the norm of 3 km. Nearly one-fourth of the children are either not enrolled in schools or are in unrecognized schools. Further, there are still about 2.97 lakh children of 6-14 age group who are out of school. Among those enrolled in schools, the dropout rate is very high. Out of 100 children enrolled in class 1, only 22 reach senior secondary level. The condition of facilities and infrastructure available in the primary schools is pitiable. More than 1,000 schools do not have buildings of their own. Even such basic necessities as drinking water and toilets are conspicuous by their absence in a large number of schools. Students do not have proper sitting arrangements and teachers do not have sufficient numbers of black-boards to teach and chairs to sit on.

Apart from physical inputs, the most glaring weaknesses are lack of motivation, outdated teaching methodology and unskilled teachers. Although Punjab has a respectable teacher-pupil ratio of about 1:42 at primary level, a one-way dialogue between teachers and students has remained the norm and learning by rote the only methodology. The prevalent teaching-learning process is inadequate for the first generation students, who are not supported by the home environment. Further, there is lack of relevance of

education to day to day life. A commitment to create specific and stated levels of learning and competence at different stages of education, is absent. At present, there is no reliable system of concurrent monitoring or evaluation at the state level. Planning is vague and indicative, with no commitment to fulfillment of stated specific targets. The main stress has only been on formulation of schemes and almost no action-research to discover what will work. Total lack of accountability towards pupils and their performance is further hindering educational development. The time has indeeed come for introspection and diagnosis, consolidation of existing resources and planning for bridging the gaps.

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.

While making certain modifications in NPE (1986) in 1992, the Central Government took a significant decision to direct the State Governments to have their own state programmes of action for implementing the thrust areas of the policy, keeping in view local conditions as also the spirit of NPE.

NPE gives priority to universalization of elementary education (UEE) and identifies it as the major goal. It, *inter alia*, lays emphasis on the following aspects of education:

(i) universal access;
(ii) universal enrollment and universal retention of children upto 14 years of age;
(iii) a substantial improvement in the quality of education.

The policy relating to secondary education implies:

(i) Providing access to secondary schools in the unserved areas.
(ii) Establishing open schools for children who cannot attend full-time schools.
(iii) Enhancing the options by ensuring a vocational stream along with the three streams of humanity, science, commerce in higher secondary schools.
(iv) Consolidating the facilities:
    a) Improvement in curriculum and evaluation methods.
    b) Improvement in infrastructural facilities, such as building, classrooms and playgrounds, etc.

Adhering to the national policy, Punjab aims to achieve the goal of universalization of elementary education. For this, separate Directorates of Primary Education and Secondary Education have been set up.

Till now, we had been adhering to the national policy. This is, however, for the first time that Punjab has initiated its own policy wherein the major objective is to universalize implementation of the national policy. A perusal of the Five Year Plans of Punjab reveal that although the First Five Years Plan did recognize quality as the key area of concern for educational reforms, the pressures for expansion were such that most of the development expenditure was consumed for opening new schools and appointment of additional teachers, rather than in making concentrated efforts to improve the quality of education. Moreover, opening of new schools and appointment of additional teachers were more attractive as a populist measure. Statistically too, the data on the number of schools reveal that the maximum increase was during 1970-80.

It was only during the Seventh Plan (1985-90) that the focus shifted from expansion and upgradation of education to consolidation of qualitative improvement. However, during the Ninth Plan (Punjab), the main focus was on both qualitative improvement and expansion and upgradation of schools, to meet the target of universalization. During the Tenth Plan, it is envisaged that the main stress will be laid on providing/upgrading infrastructural facilities in the existing schools by providing buildings/furniture. It will also cater to decentralization to the village level, training of manpower, which includes teaching personnel and leadership. The focus of the state administration in the Tenth Plan is mainly on improving the quality of education.

A study of the outlay and expenditure in different five-year plans on general education (all stages) reveals picture shown in Table 7.

Table 7
Punjab: Outlay and Expenditure in Different Five Year Plans on General Education (Rs. in lakh)

Plans	Approved outlay on education	Percentage of total outlay	Expenditure on Education
Fourth Five Year Plan (1969-74)	2100.00	7.16	2307.69
Fifth Five Year Plan (1974-78)	4327.00	4.21	3056.43
Sixth Five Year Plan (1980-85)	5300.00	2.71	5470.58
Seventh Five Year Plan (1985-90)	7637.00	2.32	6371.27
Eighth Five Year Plan (1992-97)	21683.00	2.62	23714.82
Ninth Five Year Plan (1997-2002)	41310.49	2.89	60947.61 (1997-2001)
Tenth Five Year Plan (2002-2007)	141089.77	6.07	-

Source: *Statistical Abstract of Punjab (1970-2002)*

The data reveal that the present outlay has come down to 2.89 per cent in the Ninth Plan from 7.16 per cent in the Fourth and 4.21 per cent in Fifth Plan. The percentage of the total outlay to the education sector had been consistently decreasing until the Seventh Plan. In the Eighth and the Ninth Five Year Plans, although there has been a marginal increase in the outlay i.e. it increased to 2.62 per cent in the Eighth Plan and 2.89 per cent in the Ninth Plan, but the percentage is still very low as compared to the Fourth Plan and even the Fifth Plan. Hence, it is obvious that the education sector is not being given as much priority as it was given earlier. However, the expenditure during the Ninth Plan, i.e., from 1997 to 2000 has really exceeded the given outlay. Rs.60,947.61 lakh has been spent on education in 1997-2001 as against the allotted amount of Rs. 41,310.49 lakh. The main reason was the implementation of the recommendations of the Fifth Pay Commission, wherein again the major amount was spent on salaries/state liabilities rather than educational development. In the Tenth Plan a major jump to Rs. 1,41,089.77 lakh is envisaged for the education sector and the state government claims that besides meeting the state liabilities, during this plan period, care is being taken to ensure that the money released is utilized to meet the objectives of development.

Table 8
Expenditure and Budget of School Education in Punjab, 1992-2000

Primary Education								(Rs. In Lakh)
Year	Plan		Non Plan		Total Budget Allocation	Total Expenditure	Expenditure on Salaries	% Expd. on Salaries
	Budget Allocation	Expenditure	Budget Allocation	Expenditure				
1992-93	562.00	486.00	19598	19429	20160.00	19915.00	19509.25	97.97
1993-94	288.75	157.91	20186	20072	20474.75	20229.91	20129.91	99.51
1994-95	319.00	293.65	23999	22389	24318.00	22682.65	22437.65	98.92
1995-96	120.92	59.06	26265	26089	26385.92	26148.06	26148.06	100.00
1996-97	1176.75	1026.11	30378	30376	31554.75	31402.11	30452.11	97.00
1997-98	1278.14	1053.77	38264	38262	39542.14	39315.77	38351.55	97.55
1998-99	611.61	607.61	45830	45822	46441.61	46429.61	45912.44	98.89
1999-2000	1106.28	794.21	56066	55925	57172.28	56719.21	56054.71	98.83
2000-2001	1574.52	1092.10	62552	59661	64126.52	60753.10	60067.26	98.87
Secondary Education								
Year	Plan		Non-Plan		Total Budget Allocation	Total Expenditure	Expenditure on Salaries	% Expd. on Salaries
	Budget Allocation	Expenditure	Budget Allocation	Expenditure				
1992-93	3301.02	2017.36	29499.35	27796.28	32800.37	29813.64	24682.86	82.79
1993-94	6099.28	4048.99	29253.09	29956.48	35352.37	34005.47	28861.02	84.87
1994-95	6746.5	5237.00	30411.32	32700.33	37157.82	37937.33	32455.53	85.55
1995-96	9058.5	5449.66	37462.26	38479.90	46520.76	43929.56	38366.71	87.34
1996-97	10691.5	6718.24	45019.03	47133.64	55710.53	53851.88	47301.86	87.84
1997-98	12391.38	1070561.61	51772.32	62042.91	64163.70	72748.52	65294.53	89.57
1998-99	18270.7	16806.02	70762.12	74286.95	89032.82	91092.97	81822.14	89.82
1999-2000	22620.56	19809.27	86215.21	74514.70	108835.77	94323.97	85166.89	90.29
2000-2001	27916.35	19322.05	95265.98	88930.90	123182.33	108252.95	97993.58	90.52
2001-2002	32897.58	22106.9	100299.70	96301.07	133197.28	118407.93	106663.86	90.08

Source: Directorate of Education, Punjab

In spite of the fact that educational expenditure continues to be the highest item next only to defence, the resource gap for educational needs is still one of the major problems. Punjab is spending 2.88 per cent of the SGDP on education in comparison to 3.62 per cent at the national level. However, this percentage is really less, as there was a clear indication in the NPE 1986 that the investment on education should reach six per cent of the national income.

Not only is the allocation for education very low, but, according to present data, 99 per cent of the expenditure at the primary level and 90 per cent at the secondary level are spent on salaries. The expenditure on salaries at the primary level has increased from 97.8 per cent in 1992-93 to 100 per cent in 1995-96. It dropped to 97 per cent in 1996 but has again increased and reached 99 per cent in 2000-01. At the secondary level, the expenditure on salaries has been consistently rising from 83 per cent in 1992-93 to 87 per cent in 1995, 89 per cent in 1998 and has finally reached 90 per cent in 2000-01. Such a high percentage of expenditure on salaries clearly reveals that very little is left for development of education itself.

Progress of Education at Different Levels

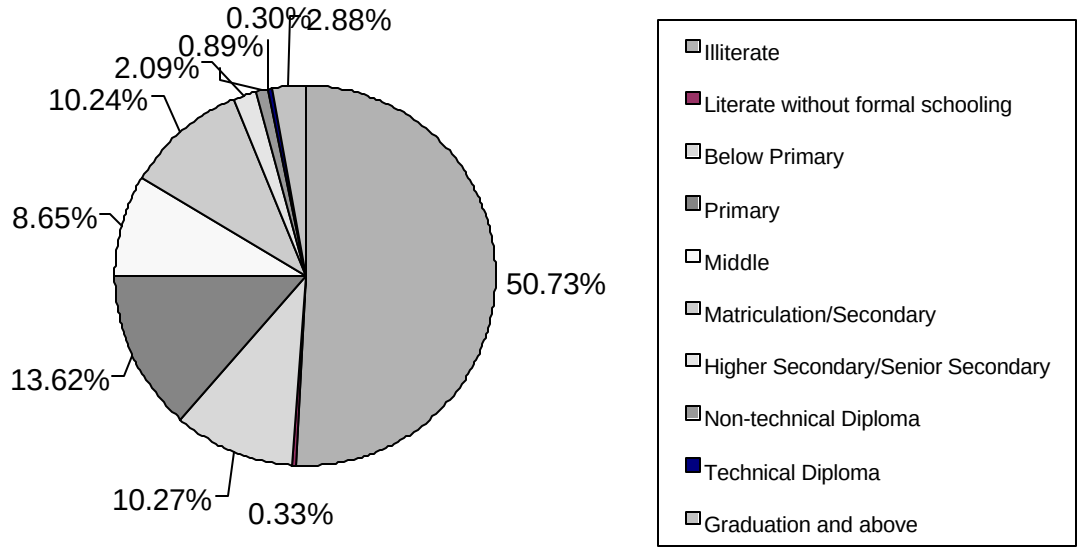
The overall educational profile of the population in Punjab is really disappointing, as reflected in Table 9.

Table 9
Educational Attainment in Punjab, 1991

Educational Level	Population	Percentage
Illiterate	10349853	51.02
Literate without formal schooling	67030	0.33
Below Primary	2094912	10.33
Primary	2772368	13.7
Middle	1797952	8.7
Matriculation/Secondary	2088856	10.3
Higher Secondary/Senior Secondary	430243	2.1
Non-technical Diploma	19894	0.9
Technical Diploma	70971	0.3
Graduation and above	589890	2.9
Total	**20281969**	**100**

Source: *Socio-cultural Tables, Census of India (Punjab), 1991*
Note: Based on total population

Figure 1
Levels of Educational Attainment in Punjab : 1991



Source: *Socio-cultural Tables, Census of India (Punjab), 1991*
Note: Based on total population

According to the 1991 Census, 51 per cent of the population in Punjab were completely illiterate. Nearly one-fourth of the population had studied only up to the primary level or below, nine per cent up to the middle level and 10 per cent up to matriculation. Only three per cent of the total population had studied up to graduate level or above. These figures are alarming and show that the overall picture of education in Punjab is very poor. A major conclusion drawn from the above table is that if a child is ensured education till elementary level, enrollment at the secondary level is inevitable. 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, which is obvious from the low figures of diploma holders.

The status of education at different levels, i.e., primary, middle, secondary and senior secondary, has been discussed under the umbrella of the major goals identified by the National Policy of Education, i.e., to ensure access to school, universal enrollment and retention of children up to the age of 14 years and improving quality of school education.

MAJOR GOALS AND ACHIEVEMENTS

Goal I: Ensure Access to Schools

Current Status

In Punjab, the state government manages 90.8 per cent of the recognized educational institutions; nine per cent are non-government, aided and/or recognized institutions and only a negligible number comes under the control of the Centre. The number of non-governmental but recognized institutions is however higher in the case of high schools and senior secondary schools than primary and middle schools, i.e., one-fifth of the high schools and one-fourth of the senior secondary schools are non-governmental institutions. Punjab Government has made great strides in expanding access to education by opening new schools at all levels. The total number of schools increased from 8,891 in 1966-67 to 18,998 in 2001. The data reveal that the most massive expansion of schooling facilities took place during the 1970s-80s in Punjab, when the number of schools jumped from 9,394 to 16,050.

Although there has been a gradual increase in the number of institutions from the 1980s to 2000, the expansion has not been that significant as in the period 1970-80.

Table 10
Number of Institutions in Punjab as on 30.9.99

Type of School	Central Govt.	State Govt.	Non-Govt. (Recognized)	Grand Total
Primary	8 (0.06)	12175 (93.7)	813 (6.3)	12996
Middle	1 (0.03)	2390 (94.3)	143 (5.6)	2534
High	9 (0.4)	1746 (79.5)	441 (20.0)	2196
Sr. secondary (10+2)	46 (4.0)	831 (71.6)	284 (24.46)	1161
Total	**64 (0.3)**	**17144 (90.76)**	**1681 (8.89)**	**18887**

Source: *Educational Statistics at a Glance of Punjab (1999)*
Note: Figures in parentheses are percentages

Table 11
Number of Schools, Government and Non-Government (Recognized), 1966-2001

Type of School	**1966-67**	**1969-70**	**1974-75**	**1980-81**	**1990-91**	**1992-93**	**1996-97**	**1999-00**	**2000-01**
Primary	7002	7256	9335	12383	12379	12462	12613	12996	13076
Middle	866	959	1397	1498	1430	1429	2545	2534	2534
High	730	919	1275	1912	2249	2104	2159	2196	2199
Higher Sec/ Sr. Sec.	293	260	245	257	520	673	1134	1161	1189
Total	8891	9394	12252	16050	16578	16668	18451	18887	18998

Source: *Economic Survey of Punjab, 2001-02*

Table 12
District-wise Number of Villages with Schools

District	No. of villages surveyed	No. of villages having				Total upper primary sections (3+4+5)	Total secondary sections (4+5)
		GPS	GMS	GHS	GSSS		
		2	3	4	5		
Amritsar	1249	1216	217	165	64	446	229
Bathinda	302	294	73	83	61	217	144
Faridkot	198	195	77	41	18	136	59
Fatehgarh Sahib	437	416	65	40	24	129	64
Ferozepur	1079	1030	180	95	65	340	160
Gurdaspur	1555	1459	241	137	104	482	241
Hoshiarpur	1410	1202	172	141	92	405	233
Jalandhar	886	830	151	117	76	344	193
Kapurthala	588	518	108	66	45	219	111
Ludhiana	935	854	181	165	79	425	244
Mansa	242	238	95	47	20	162	67
Moga	313	307	69	83	57	209	140
Muktsar	251	248	75	69	38	182	107
Nawan Shehar	433	409	88	57	32	177	89
Patiala	1094	1042	167	110	73	350	183
Ropar	903	812	119	76	52	247	128
Sangrur	750	727	206	156	61	423	217
Total	12625	11797 (93.44)	2284 (18.09)	1648 (13.05)	961 (7.61)	4893 (38.76)	2609 (20.67)

Source: Tentative Data, Department of Education, 2002

Note: - Numbers represent villages having the respective education facility so do not correspond with number of schools.

- Upper Primary (classes 6-8) are run in GMS, GHS and GSSS so for the purposes of upper primary total of (3+4+5) represent upper primary section.
- Secondary classes, i.e., (classes IX-X) are run in both GHS and GSSS. So the total of (4+5) represent number of secondary section.

The number of primary schools increased tremendously in the past. It rose to 7,256 in 1970 and reached 12,383 in 1980. At present it has already reached 13,076 (2000-01).The number of middle schools was 1,498 in 1980-81, increased to 2,545 in 1996-97, and is at present 2,534. High schools numbered 919 in 1969-70, 1,275 in 1974-75,1,912 in1980-81, 2,249 in 1990-91 and 2,199 in 2000-01. It is evident that the number of schools really increased only during 1970-80. Senior secondary schools too increased to 1,189 in 2000-01 from 520 in 1990.

The data of the survey conducted in 12,625 villages by the Education Department reveal that except for some remote/unserved areas, there is a primary school in almost every village. There is likelihood of shortage of primary schools in Mand/Kandi/Border and Bet areas of Punjab, because of their difficult terrain. However, at the other end, the data also show that there are only 39 per cent of villages, having elementary sections and only 21 per cent which have secondary sections.

Even if we consider the distance norm as laid down by government, there are only 84 per cent habitations which have a middle school within three kms. which means shortage of elementary sections in 16 per cent habitations**.** Similarly, there is also a shortage of secondary and senior secondary schools in 10 per cent and 20 per cent

habitations, according the distance norm of five kms. and eight kms. respectively *(Sixth All India Educational Survey, 1993-94).*

The assessment of the number of schools reveals that though the state is progressing well and there has been a quantitative expansion of educational institutions in Punjab, the real increase in the number of schools has been just at the primary level. However, according to the present data, following the norm that there should be one secondary section for every 1.8 elementary section, the shortage comes to nearly 6,000 secondary schools. This indicates that even if all the secondary schools are upgraded upto the senior secondary level, there will still be a shortage of nearly 3,000 schools.

Alternate Schooling

Non-formal education for children in the 6-14 age-group: In pursuance of the National Policy on Education, 1986, the Central Government provides help for the establishment of non-formal education centres. But in Punjab, neither the government, nor NGOs, nor voluntary agencies run any such centres. Non-formal education was carried on until 1991, but there are no data available. However, since 1991, Punjab has no facility for non-formal education at the primary or upper primary level for children in the age group 6-14. In only one district of Amritsar, a Chandigarh- based NGO applied to the Centre for starting NFE centres in 90 slums of the district. This project has been approved. But at present, no non-formal educational centre is operational. It is, however, proposed that under the Sarv Shiksha Abhiyan, in the Tenth Plan, the Education Guarantee Scheme and alternative innovative education will be initiated.

Open school programme for children in the 14-18 age-group: The National Policy 1986, had proposed alternative education/open schools at the secondary level to provide access to dropouts, working children and girls. However, the state's effort so far has been to bring the children to mainstream/ formal schooling, and hence not much work has been done on open schools, though the large number of school dropouts warrant such an initiative.

Punjab started the open school programme in 1992, as an integral part of Punjab School Education Board as a centre of open learning to cover the gap at the secondary level. PSEB is operating the programme with 175 centres and 16,000 students. It has not developed any separate set of operational procedures except providing flexibility in the number of chances for passing examinations. In 1994-95 the open school was converted into a correspondence course, as a distance education programme. It has the same curriculum, examination and certification process as in formal schools. Except for this programme at the matriculation level, there is no alternative schooling in the state at present for the out-of-school children in the 14-8 age group. The open school in Punjab is dependent only on student fees. In the absence of any financial support and requisite publicity, it has not realized its full potential. Recently, the state government claims to have formed VEDCs in the villages to check drop-out rates under SSA. However till date, Punjab Open School has hardly been able to cover even one per cent of the out-of-school children at the matriculation level. The open schools in fact have lost their orientation and become a haven for unrecognized schools which wish to expand up to the secondary level of education and get their pupils certified through these open schools. To restore the essential character of the open schools, steps have to be taken urgently to rescue these from the stranglehold of commercially-run private schools. Further, Central funding is required to subsidize the study material and offset publicity

costs. At present, the number of study centres is far short of the requirement. Central assistance is essential for the extension and upgradation of the study centre network. But the best way will be to utilize the existing school infrastructure (buildings and teachers) innovatively for such non-formal education.

Goal II: Universal Enrollment and Retention of Children up to the Age of 14 Years

Current Status

Table 13
Admission in Schools, 1984-1998 (in lakh)

Year	Class I	Class VI	Class IX	Class XI
1984	4.49	2.72	1.70	0.33
1998	4.80	3.64	2.78	1.08

Source: Directorate of Education, Punjab

Enrollment in primary classes in government and recognized schools has remained almost static for 15 years, i.e., the number of admissions has increased from 4.49 lakh to only 4.80 lakh during 1984 to 1998. The growth at upper primary, high and senior secondary levels seems to be quite healthy, but in reality the picture is not that rosy, as it is based on a smaller base.

Total enrollment of students in recognized institutions increased from 30.6 lakh in 1980-81 to 36.61 lakh in 1991. However, the increase in the next nine years was not that significant. It touched only 39.48 lakh in 2000. These figures reveal that massive expansion in enrollment took place in 1980-90. Enrollment among girls increased from 13.1 lakh in 1980 to 15.9 lakh in 1991 and reached 18.55 lakh in 1999-2000. Presently, it has marginally decreased to 18.47 lakh in 2000-2001, whereas the enrollment of boys increased from 17.4 lakh (1980) to 20.0 lakh (1990) and only to 21.01 lakh (2001). The increase in enrollment has been more in the case of girls (5.37 lakh) than boys (3.61 lakh) during 1980-2001 (Table 14).

Further, enrollment of Scheduled Caste students too has been rising in the age groups 6-11, 11-14 and 14-18. The increase was from 7.9 lakh in 1980 to 10.2 lakh in 1991 and has touched 14.31 lakh in 2000-01. The real expansion in enrollment of SCs is, however, a recent phenomenon. Their numbers grew the maximum in 1990-2000. However, the share of SCs at the primary level was 43.84 per cent of the total students in 2000-01, which came down to 32.89 per cent at the middle level and to 21.18 per cent at the secondary level. This has emerged as a very important intervention area for the government, as the data reveal a high dropout rate among Scheduled Castes as they move to higher levels of education.

Table 14
Enrollment of Scheduled Caste, Non-Scheduled Caste and Total Students in Recognized Institutions, 2000-2001 (In lakh)

Age-group	Total Students			Non-Scheduled Castes			Scheduled Castes		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
	1	2	3	4	5	6	7	8	9
6-11									
1980-81	11.4	9.3	20.7	7.9	6.7	14.6	3.5	2.6	6.1
1990-91	11.1	9.5	20.7	7.1	6.3	13.5	4.0	3.2	7.2
1999-2000	11.25	10.12	21.37	6.38	5.67	12.05	4.87	4.45	9.32
2000-01	11.20	9.92	21.12	6.32	5.54	11.86	4.88	4.38	9.26

11-14									
1980-81	4.3	2.7	7.0	3.4	2.3	5.6	0.9	0.4	1.4
1990-91	5.3	3.9	9.3	4.1	3.2	7.3	1.2	0.7	2.0
1999-2000	5.27	4.69	9.96	3.57	3.21	6.78	1.70	1.48	3.18
2000-01	5.22	4.69	9.91	3.49	3.16	6.65	1.73	1.53	3.26
14-18									
1980-81	1.8	1.1	2.9	1.5	1.0	2.5	0.3	0.1	0.4
1990-91	3.6	2.5	6.1	2.9	2.1	5.1	0.7	0.4	1.0
1999-2000	4.54	3.74	8.28	3.56	2.99	6.55	0.98	0.75	1.73
2000-01	4.59	3.86	8.45	3.60	3.06	6.66	0.99	0.80	1.79
Total									
1980-81	17.4	13.1	30.6	12.7	10.0	22.7	4.7	3.1	7.9
1990-91	20.0	15.9	36.1	13.3	11.6	25.9	6.7	4.3	10.2
1999-2000	21.06	18.55	39.61	13.51	11.87	25.38	7.55	6.68	14.23
2000-01	21.01	18.47	39.48	13.41	11.76	25.17	7.60	6.71	14.31

Source: Director Public Instruction, Schools, Punjab; cf *Economic Survey of Punjab, 2001*

It was also felt pertinent to study the age-specific enrollment ratios in the age group 6-14.

Table 15
Age-specific Enrollment Ratios in Select States, 1999

	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
Gujarat	81.39	70.56	76.14	90.63	72.92	82.23	84.75	71.40	78.33
Tamil Nadu	79.58	76.49	78.06	90.99	82.63	86.92	83.83	78.75	81.34
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,* Data pertains to 1993-94

The age-specific enrollment ratio is only 74.01 for children in the age group six to below 11 and 69.19 for the 11 to 14 age group. Further, only 55 per cent of the children in the 14-7 age group are enrolled in schools. The enrollment ratio is 74.99 for boys and 72.9 for girls in the six to 11 age group and 72.18 for boys and 65.82 for girls in the 11 to 14 age group. Although Punjab's figures are higher than the national enrollment figures (63.17), it is still behind many other states such as Kerala, Himachal Pradesh, Gujarat, Tamil Nadu, etc. In spite of the tall claims of the Punjab Government of achieving a state of high excellence in education, it is a matter of concern that 28 per cent of our children in the 6-14 age group are as yet either not enrolled or are in unrecognized schools.

From independence till the sixties, most children attended schools run by different state governments and the number of private schools was rather small. Recently there has been an expansion in the number of private schools.

Table 16
Percentage Distribution of Students (6-14 Age Group) in Government/ Government-aided and Private Schools in Select States, 1994

States	Government Schools/Govt.-aided Schools	Private Schools
Harayana	86.9	12.8
H.P.	95.0	4.8
Punjab	**80.2**	**19.5**
Bihar	90.6	8.6
U.P.	73.8	27.2
M.P	96.1	3.8
Orrisa	95.7	4.1
Rajasthan	96.5	3.4
West Bengal	99.0	1.0
Gujrat	98.2	2.0
Maharashtra	98.3	1.5
Andhra Pradesh	89.7	10.2
Karnataka	90.2	9.6
Kerala	88.0	12.0
Tamil Nadu	93.0	7.0
All India	90.0	9.8

Source: *India Human Development Report, 1999*

On the whole, in rural India, about 90 per cent of all school-going children in 1994 attended government/government-aided schools. Other states, such as HP, Bihar, MP, Orissa, Rajasthan, Maharashtra, Karnataka and Tamil Nadu too had a very high percentage of children going to government/ government-aided schools. Even Kerala had 88 per cent of children in government/government-aided schools. However, Punjab is the topmost state after UP, with a relatively high proportion of students attending private schools.

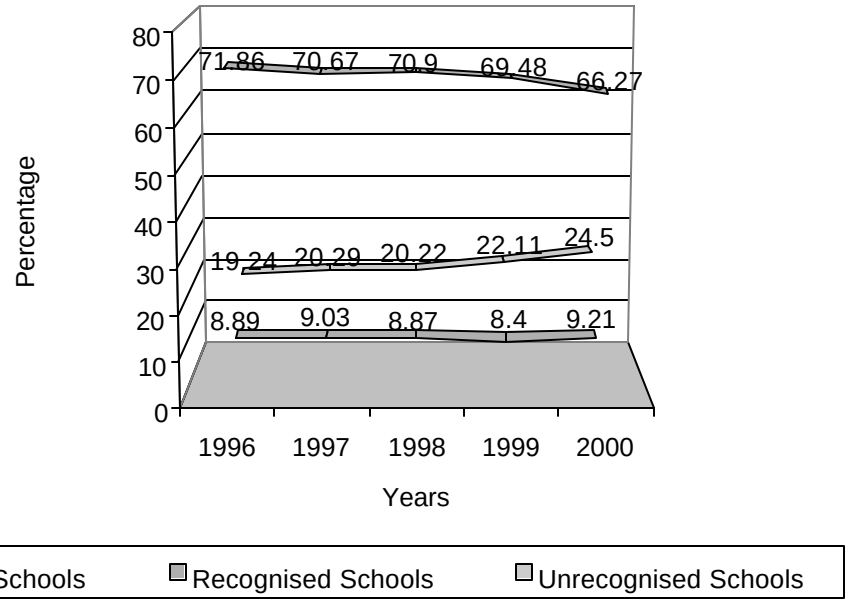
In the last decade or so, there has also been a rapid increase in the number of unrecognized private schools in Punjab at the primary level (figures under documentation). The enrollment of children in these unrecognized schools in Punjab has reached 25 per cent of total enrollment at the primary level, although the number of such unrecognized schools is negligible at the middle and high level. Taking into account the unrecognized schools, total enrollment in primary schools, increased 5.20 per cent during 1996-2000 which is obvious from the data in Table 17.

Table 17
Management-wise Enrollment at Primary Level, 1996-2000 (Per cent to Total)

Year	Govt. Schools	Recognised Schools	Un-recognised Schools
1996	71.86	8.89	19.24
1997	70.67	9.03	20.29
1998	70.90	8.87	20.22
1999	69.48	8.40	22.11
2000	66.27	9.21	24.50

Source: Directorate of Education, Punjab (1996-2000)

Figure 2
Management-wise Trends in Enrollment at Primary Schools Level : Punjab



Source: Directorate of Education, Punjab (1996-2000)

The share of government schools in total enrollment in primary classes is gradually decreasing and has come down from 71.86 per cent in 1996 to 66.27 per cent in 2000. The share of recognized schools in total enrollment is marginally increasing and has gone up to 9.21 per cent from 8.89 per cent in 1996-2000. Larger growth is in the unrecognized schools, which has gained 24.50 per cent points (2000) from 19.24 per cent points (1996). It reflects the diminishing confidence of the public in government-run schools, which not only lack such basic infrastructure as buildings and furniture, but also motivation and commitment of the teachers. Hence households with comparatively higher income prefer to send their children to private schools, which they perceive as imparting qualitatively better education. However, without undermining their role in enrolling children in small mohallas, who might otherwise have been out of school, the government has recently started the policy of enlisting the unrecognized schools so that these are also brought under some kind of check and control, and also to enable the educational data of these schools to be included in the education statistics of the state.

Household expenditure: According to the Constitution of India, primary and elementary schooling have to be provided free of cost to all citizens. However, except for tuition fees, parents continue to bear the expenditure on other kinds of fees, books, stationery, uniforms, etc.

Table 18
Per Student Annual Household Expenditure on Elementary Education by Select States, 1992 and 1994

States	1992	1994
Harayana	801	696
H.P.	-	842
Punjab	**612**	**670**
Bihar	246	375
U.P.	-	351
M.P	281	258
Orisa	309	253
Rajasthan	364	428
West Bengal	504	316
Gujrat	342	278
Maharashtra	329	302
Andra pradesh	378	295
Karnataka	448	383
Kerala	754	586
Tamil Nadu	349	379
All India	4640	378

Source: *India Human Development Report, NCAER, 1999*

On an average, at the elementary level (including private schools), the household expenditure per child is annually Rs. 670 (1994) in Punjab. It has increased from Rs.612 in 1992. This is despite the fact that free elementary education has been declared as a fundamental right. Household expenditure is quite high when compared to the national level, where the per pupil expenditure is Rs.378. Household expenditure per child is Rs. 479 in government schools and Rs.1,398 in private schools in Punjab, as compared to Rs. 317 in government schools and Rs.742 per annum in private schools at the national level. Punjab ranks third (only after Haryana and Himachal Pradesh) so far as household expenditure on elementary education is concerned. It was reported that a major chunk of the household expenditure on education was also spent on private coaching/tuitions, apart from transport, uniform and books.

The state government also spends quite a large budget on school education. About 1,15,855 teachers and 19,554 support persons work in the department. There are three Directorates functioning under the aegis of education. There are four accepted levels of education – Primary, Middle, Secondary and Senior Secondary. Figures from NSSO 52nd round (1995-96) show that Punjab spends more than double the national average on school education. The average expenditure per child in general education by Punjab is Rs. 1,394 in rural areas as compared to only Rs. 570 in India. Again, in urban areas, Punjab spends Rs. 2,786 per child as compared to Rs. 1,686 at the all-India level. It is, therefore, high time that the state rationalizes its per student expenditure.

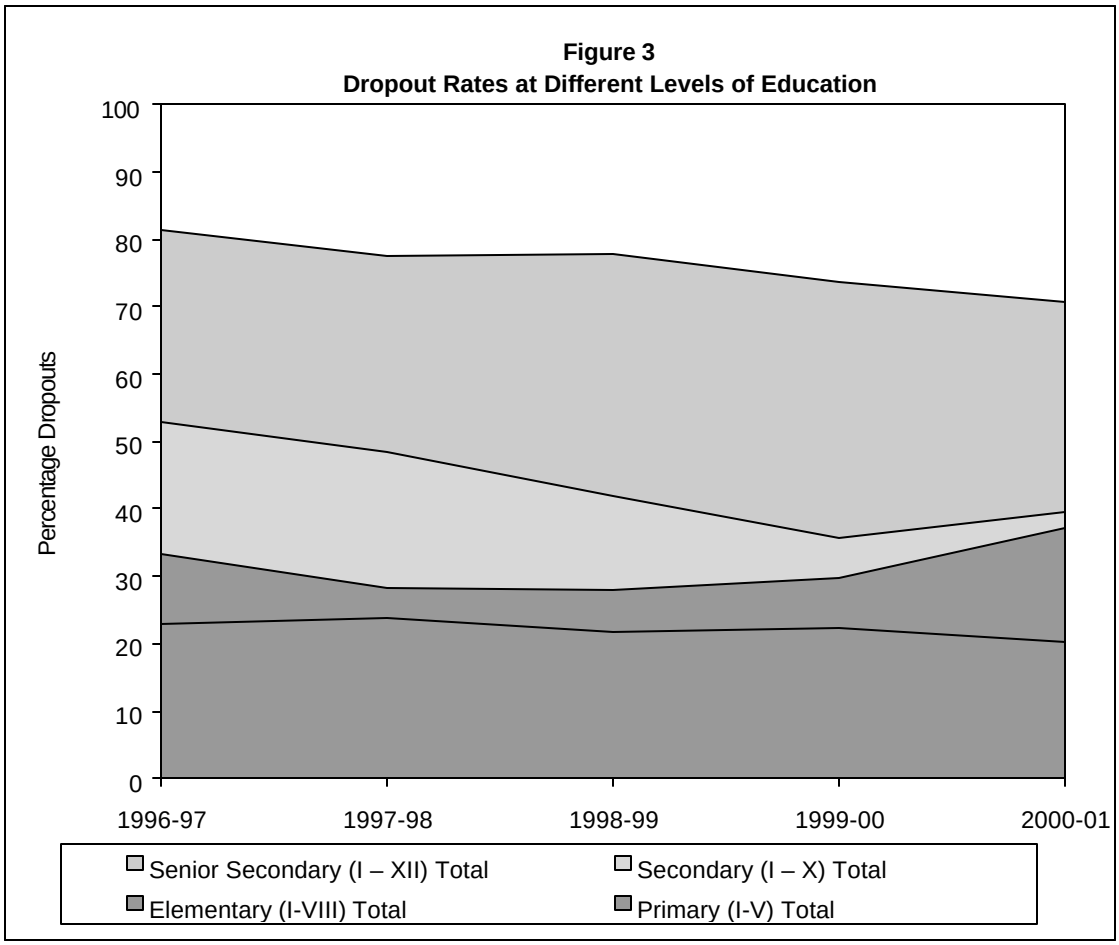
Retention in Schools

Household and state expenditure per child show that huge amounts are spent in educating every single child. Therefore, enrollment by itself is no panacea if children do not continue education beyond a few years. Dropout is in fact an indicator of wastage in education.

Table 19
Dropout Rate in Punjab, 1988-2000

Year	Primary (I-V)			Elementary (I-VIII)			Secondary (I – X)			Senior Secondary (I – XII)		
	Male	Fe-male	Total	Male	Fe-male	Total	Male	Fe-male	Total	Male	Fe-male	Total
1988-89	29.20	29.62	29.39				-	-	-	-	-	-
1991-92	29.83	30.25	30.02	33.12	41.29	36.90	-	-	-	-	-	-
1992-93	31.05	31.85	31.42	42.77	48.40	45.38	-	-	-	-	-	-
1993-94	20.69	22.94	21.74	36.15	72.78	39.23	44.88	52.81	48.54	-	-	-
1994-95	22.63	22.94	22.74	37.68	43.01	40.15	51.54	56.88	54.01	-	-	-
1995-96	22.83	22.61	22.73	38.16	43.58	40.66	51.03	54.29	52.54	79.58	83.27	81.28
1996-97	24.03	21.76	22.97	31.29	35.82	33.41	51.39	54.71	52.93	80.00	82.93	81.40
1997-98	25.21	22.28	23.84	26.56	30.50	28.40	46.89	50.10	48.37	76.28	79.28	77.60
1998-99	22.86	20.62	21.79	26.75	29.28	27.92	39.99	44.35	42.03	76.43	79.47	77.84
1999-00	24.83	20.15	22.49	29.82	29.90	29.86	35.37	35.73	35.54	-	-	-
2000-01	21.96	18.53	20.36	36.86	37.42	37.13	40.39	38.84	39.67	-	-	-

Source: Directorate of Secondary Education, Punjab



Source: Directorate of Secondary Education, Punjab

The dropout rate at the primary level of education in Punjab declined from 31.42 per cent in 1992-93 to 21.74 per cent in 1993-94 but thereafter it increased marginally and has again declined to 20.36 per cent at present, which is less than the dropout at the National level (42.39%, 1998-99). Surprisingly, the dropout rate for boys (21.96%) is more than that of girls (18.53%) at the primary level. Although at the elementary level

the drop-out is less in Punjab than at the all India level (56.82% in 1998), it continues to be at 37 per cent, as it was in 1991-92. The male and the female dropout rates are almost similar at the elementary level. At the secondary level, the dropout rate increased from 48.54 per cent in 1993-94 to 54.01 per cent in 1994-95, but thereafter it consistently declined till 1999 and reached 35.54%, but recently it has again risen to 40 per cent (2000-01).

In spite of the government's initiative to reduce the dropout rate, the figures continue to be very alarming. It is a matter of great concern that 20 per cent of the children drop out of schools at the primary level, 37 per cent by the time they reach the middle level, 40 per cent at the secondary and 78 per cent at the 10+2 level, i.e., 78 per cent of the children in class I dropout by the time they reach senior secondary classes. It is a matter of serious concern that out of the total students enrolled in class I only 22 per cent reach class XII.

Out-of-school children: According to the survey conducted by the Directorate of Education, there are 1.69 lakh children in the 6-11 age group and 1.28 lakh children in the 11-14 age group in the state, who do not attend school. According to the data available, 2.97 lakh children in the 6-14 age group and 10.52 lakh children in the 14-8 age group are out of the school network**.**

Table 20
Out-of-school Children, 2001

Age-group	Male	Female	Total
6-11	89276	79701	168977
11-14	67072	61400	128472
6-14*	156348	141101	297449
14-17**	540126	512504	1052630

Source: Directorate of Education, Punjab
Note: * Based on village survey
** Based on projected population and enrollment

It may be observed that 76.91per cent of the out-of-school children belong to the SC or OBC population**.** Even the remaining 23.09 per cent, though may be coming from upper social classes but belong to the economically weaker sections.

Further, the Directorate of Education also confirms that out of the 2.97 lakh children not going to schools, 1.13 lakh (37.91%) are engaged in one or other kind of labour activity and the majority of them are in the age group 11-14 years.

Besides working as labourers or assisting their parents in work, the other reasons for children remaining out of school/or dropping out of school, identified by the Directorate of Education are: 1) poverty, 2) large family, 3) lack of inspiration/ interest/awareness or disinterest among parents and children, 4) illness/death/desertion/ emigration of either of parents, 5) lack of teachers/ infrastructure in schools, 6) study curriculum uninspiring/ dull/difficult, 7) teachers uninterested/uninspiring/dull/rude, 8) timing not convenient and 9) access to school/difficult/far away, etc. In addition to the reasons mentioned above, field studies also suggest that many parents still hesitate to send girls to co-educational institutions and are particularly averse to those in which there are no women teachers. In Punjab there are 48 per cent such schools. Thus, state intervention becomes important in not just providing sound education, economic incentives and committed teachers, but also in tackling the socio-cultural impediments.

Further, it is not only important to initiate schemes but also to ensure its regular monitoring, e.g., the scheme for providing scholarships for attendance to the SC girls is being promoted as an economic incentive, but field visits to different schools in various districts in Punjab revealed that money for disbursement under this scheme is not remitted regularly. Scholarships are not paid in time, if paid at all, was the common complaint of the school authorities. Many a time, the scholarships were received after the students had passed out of the Institution.

Goal III: Improving Quality of School Education
(In terms of strengthening curriculum, teaching practices, evaluation methods, teacher-pupil ratio, options and infrastructural facilities)

Current Status

Heavy obsolete syllabus, outmoded teaching methods and inappropriate examination system: Overall improvement in curriculum, teaching practices and examination methods were the core targets for secondary education, envisaged even in the year 1986 as mentioned in the National Policy of Education. However, at present, the quality of school education and the creativity of students are being adversely affected by the heavy syllabus prescribed and the system of examination and awarding marks in the schools. Although, Punjab Government claims that it is striving to make the curriculum more relevant to local specificities, many studies, including the one conducted by CRRID in Faridkot and Lambi Blocks in Punjab, reveal that the parents are not satisfied with the syllabus taught, as they feel that it does not give their children access to skills that are related to the employment available outside. Empirical studies reveal that people felt that what their children learnt in schools were not relevant for everyday life. It was also suggested by the teachers of different schools 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 were not of practical value in day to day life and hence could be listed as optional subjects. It is important to make the curriculum more relevant and flexible.

It is also strongly felt that present methods of teaching are quite outmoded especially in the rural areas. The percentage of rural enrollment to total enrollment is as high as 75 per cent at the primary level and 70 per cent at the middle level. Quite often, the teachers encourage memorizing the contents of books and rote learning. There is also very little stress on value-education in the curriculum. Teachers and curriculum have been reported as uninspiring. This has been a major reason for school dropouts. The level of satisfaction of children/parents can be imagined from the fact that out of 100 students enrolled in class I in Punjab, only 60 per cent reached class 10 and 22 per cent reached class 12.

Further, urban-rural disparities emerge because of the privately managed English-medium institutions, generally located in urban areas. Although Punjab Government has decided to introduce English language in all government schools in the class 3 itself (according to the latest Education Policy, 2002), it, however, seems that this will create more problems than solve them.

One notices that nearly 98 per cent expenditure at the primary level and 90 per cent at the secondary level are incurred on salaries of teachers and administration, leaving very little for socially useful work programmes, excursions, games and hobbies, science equipment and kits or even simple blackboards, chalks, posters and charts. In these circumstances, even an inspired teacher, with the best of training would have no choice but to encourage rote-learning of texts.

The present mode of teaching/learning is a matter of concern when one considers that in Punjab only 75 per cent of the school-age children ever go to recognized primary schools and only 58 per cent appear for the 10th standard public examination. The pass percentage in the matriculation examination is only 49 per cent for regular students and 33 per cent for those appearing privately. Pass percentages have deteriorated over the years both among regular as well as private students.

Table 21
Pass Percentage in Matriculation Examination, 1998-2001

Year	Regular	Passed	%age	Private	Passed	%age
1998	284456	187613	65.95	58545	24430	41.72
1999	274275	134858	49.16	76665	31828	41.51
2000	307949	161824	52.54	84999	33972	39.96
2001	272465	133996	49.17	100968	33854	33.52

Source: *Punjab State Education Board, Mohali*
Note*:* * Data pertains to Punjab School Education Boards only

Low examination results at grade 10 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 nearly 50 per cent failure rate in 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?

It is, therefore, suggested that while classroom learning is important, what the child learns by self-observation outside the classroom is equally important. The child must become an active participant in the process of learning through observation, field studies, experiments and discussions. The child's individuality and creativity needs to be given due importance. Innovations in curriculum, which should be based on the needs of the learners and related to the local environment, are required. It has been strongly recommended by educationists that there should be no textbooks upto the fifth class and the curriculum should be totally activity-based. Priority also needs to be given to reorientation in the outlook of the teachers, which at present is getting highly commercialized, as reflected in the number of tuitions being encouraged by them. There is also need for overhauling the examination system, so that it recognizes and evaluates creativity and new thinking rather than mere memorization. Schools must change from mere education shops to centres for imparting knowledge and building skill levels.

Teachers will perhaps have to play the most important role to enable the coming generations to develop capabilities to cope with a profoundly change-oriented world. But for this, teachers, education/training will have to be adopted as the first area of intervention.

Teacher-pupil ratio: The teacher-pupil ratio is also an important indicator of the quality of school education.

Table 22
District-wise (Stage-wise) Teacher-Pupil Ratio, 2001

Year/District	Class			
	I to V	VI to VIII	IX and X	XI to XII
1971	42	30	18	-
1980	41	25	17	-
1990	38	20	29	-
1997	40	29	22	24
1998	42	28	22	21
1999	41	26	23	26
2000	42	26	23	28
District, 2000				
Gurdaspur	32	27	21	26
Amritsar	40	24	32	24
Kapurthala	36	23	20	30
Jalandhar	45	28	28	24
Nawanshehar	47	31	22	19
Hoshiarpur	35	28	25	29
Rupnagar	36	23	21	14
Ludhiana	40	25	21	26
Ferozepur	49	27	22	28
Faridkot	47	23	13	20
Muktsar	55	24	22	28
Moga	54	32	23	17
Bathinda	51	28	19	15
Mansa	60	31	22	43
Sangrur	50	28	20	20
Patiala	41	26	21	23
Fatehgarh Sahib	45	29	22	13

Source: DPI, Punjab; cf *Statistical Abstract of Punjab, 2001*

In Punjab, the teacher- pupil ratio is 1:42 at the primary level, 1:26 at the middle level, 1:23 at the secondary and 1:28 at the higher secondary level (2000). However, notwithstanding this overall satisfactory position, there are significant inter-district disparities, especially in primary schools. In some districts, such as Muktsar, Mansa, Moga and Sangrur, the teacher-pupil ratio is more than 1:50 at the primary level.

Table 23
Classification of State Primary Schools on the Basis of Sanctioned Posts of Teachers/Head Teachers/Centre Head Teachers, 2002

District	No Teacher	One Teacher	Two Teacher	Three Teacher	Four Teacher	Five Teacher	Six Teacher	Seven Teacher	Eight or More Teacher
Amritsar	52	1	328	268	233	213	114	64	141
Bhatinda	33	1	59	59	69	47	39	17	66
Faridkot	32	10	51	42	26	32	18	16	33
Fatehgarh Sahib	5	0	237	114	52	36	7	1	4
Ferozepur	95	11	612	205	94	64	35	21	23
Gurdaspur	94	69	619	359	210	113	52	22	24
Hoshiarpur	42	10	460	349	227	138	30	16	24
Jalandhar	42	10	267	210	156	167	59	29	57
Kapurthala	52	2	237	106	63	73	13	3	11
Lothian	39	2	152	191	179	222	74	56	99
Mansa	11	1	55	62	57	38	17	18	27
Moga	30	2	85	36	28	57	29	18	87
Muktsar	25	4	39	56	50	61	36	16	33
Nawanshehar	12	6	151	132	75	48	9	3	6
Patiala	86	85	418	252	156	91	45	24	28
Ropar	21	13	481	170	99	54	17	10	10
Sangrur	75	15	223	185	140	103	54	26	51
Total	**746 (5.5)**	**242 (1.8)**	**4474 (33.2)**	**2796 (20.8)**	**1914 (14.2)**	**1557 (11.6)**	**648 (4.8)**	**360 (2.7)**	**724 (5.4)**

Source: Tentative figures derived from the Directorate of Education, 2002
Note: Data pertains to total functional schools (13461) including branch schools recently regularized under SSA

Surprisingly, at the primary level in Punjab there are 242 (2%) schools, which have only one sanctioned post for a teacher. Shockingly, there are 746 schools (6%) where there is no sanctioned post of a teacher/head teacher/or a centre head teacher and this is especially true in Gurdaspur, Sangrur, Ferozepur and Patiala districts. The rationale behind some schools not being sanctioned a single post of a teacher and the others being sanctioned eight posts to teach five classes is not known. Frequent transfers of teachers is another area of concern.

Further, field visits in the blocks of Punjab have shown that, in rural areas, even where there are teachers, there is the persistent problem of absenteeism. This becomes even more serious in single-teacher schools. Panchayats could, therefore, be given the role of monitoring absenteeism among teachers. During field visits, it was also observed that teaching by proxy teachers existed in areas off the main roads.

Lack of options: The major challenge of education to achieve the ends of equity, documented in the policy perspective, is to ensure the availability of facilities for studying science and vocational subjects in all secondary schools so that everyone would be able to exercise equal freedom of choice with regard to the professions that they would like to pursue in future. In Punjab, the actual choice of subjects starts at the higher secondary level and the status is revealed in Table 24.

Table 24
Breakup of Senior-Secondary Schools (State Govt), 1999

Year	Arts	Science	Commerce	Vocational
1999	847 (100)	408 (47.1)	311 (36.7)	262 (30.9)

Source: Education Department, Punjab

The data reveal that Arts courses are available in all senior secondary schools. However, the option of choosing other courses as science, commerce, vocational, etc., is available only in a limited number of schools. In fact only 47 per cent of the schools have the option of science, 37 per cent commerce and 31 per cent vocational education.

Table 25
Enrollment according to the Type of Courses at 10+2 Stage, 1993-94

	Arts		Science		Commerce		Agriculture		Vocational/ Technical		Others		Total	
Rural	**T**	**G**	**T**	**G**	**T**	**G**	**T**	**G**	**T**	**G**	**T**	**G**	**T**	**G**
XI & XII	32862 (79.8)	10975 (81.9)	2527 (6.1)	942 (7.0)	1212 (2.9)	337 (2.5)	246 (0.6)	73 (0.5)	2852 (6.9)	705 (5.3)	1465 (3.6)	359 (2.6)	41164	13391
Urban														
XI & XII	59524 (66.0)	28723 (70.4)	13692 (15.2)	6068 (14.9)	7435 (8.3)	2704 (6.6)	127 (0.1)	54 (0.1)	5583 (6.2)	2093 (5.1)	3747 (4.2)	1180 (2.9)	90108	40822
Total														
XI & XII	92386 (70.4)	39698 (73.20	16219 (12.4)	7010 (12.9)	8647 (6.6)	3041 (5.6)	373 (0.3)	127 (0.2)	8435 (6.4)	2798 (5.2)	5212 (3.9)	1539 (2.8)	131272	54213

Source: *Sixth All India Education Survey, 1999,* Data pertains to 1993-94

At the 10+2 level, a large majority of the students (70%) opt for Arts and only a very small proportion (12%) opt for science, seven per cent for commerce and six per cent for vocational courses. There are significant urban-rural differences emerging in the choice of subjects; 80 per cent of students in rural areas opt for arts subjects as compared to 66 per cent in urban areas. The percentage of children opting for science and commerce is comparatively more in urban than in rural areas. Vocationalization of higher secondary education was the major objective of the reforms envisaged in the Education Policy. It however seems that attempts made so far have not borne fruit and enrollment in the vocational stream, which was expected to reach 50 per cent at the 10+2 level, has remained rather marginal as only six per cent have opted for it in both rural and urban areas.

Table 26
Distribution of Enrollment at Senior Secondary Stage in Select States by Course of Study, 1993-94

State	Arts	Science	Commerce	Agriculture	Vocational	Others	Total
Karnataka	64.80	16.50	14.80	0.30	2.50	1.00	100
Kerala	13.40	31.80	5.50	5.80	41.50	2.00	100
Madhya Pradesh	31.80	46.70	12.30	4.60	2.60	2.10	100
Maharashtra	52.80	19.00	23.30	0.20	4.10	0.60	100
Manipur	46.40	36.70	5.70	0.00	1.60	9.60	100
Meghalaya	38.00	56.20	3.50	0.00	2.30	0.00	100
Andhra Pradesh	28.40	44.00	24.10	0.20	2.80	0.40	100
Punjab	**70.40**	**12.40**	**6.60**	**0.30**	**6.40**	**4.00**	**100**

Source: *Sixth All India Educational Survey, 1999,* Data pertains to 1993-94

Further, in Punjab only 12 per cent of the students opt for science as compared to 32 per cent in Kerala, 47 per cent in Madhya Pradesh, 56 per cent in Meghalaya and 44 per cent in Andhra Pradesh. Similarly, children opting for commerce are less in Punjab than in other states. The state is also far behind Kerala in vocational education. The main reason for it is the outdated syllabus, with no relevance to the technical requirements in the employment market. Hence this stream is less popular as it fails to prepare the child for work and for upward mobility. The committed expenditure on teachers with knowledge limited only to a particular outdated field, already in employment with no

students opting for it is a burden on the state. As pointed out by the government itself 'many experienced teachers have stated that vocationalization within the secondary school system has been a casualty at the hands of educational planners who have no insight into the opportunities of employment, or the type of expertise required, for vocational employment. Consequently, lack of professionalism characterizes every initiative in the planning of training of teachers, preparation of curricula, selection of courses, infrastructure and other prerequisites. For future planning, therefore, while laying stress on vocationalization of education, adequate financial resources have to be allocated for starting viable activities in this field. Adequate infrastructure and manpower prerequisites have also to be sorted out.

The total non-enrollment of the children at the secondary level (45%), their dropout rate (48% at the secondary and 78% at the higher secondary level), their results (50% failure at the matriculation level), all show that the secondary and senior secondary levels have remained a terminal stage for the child to stop education. Perhaps this is considered as the time for the child to start working. Actually, secondary education was never considered a goal and this was perhaps the major drawback of education planners. It is only now that the state is moving towards secondary education and is preparing itself for universal secondary and senior secondary education by the year 2015 (*World Bank Report prepared by Department of Education, 2002*).

Lack of infrastructural facilities in schools: For the child, the school is one of the main agencies of socialization, and the first prerequisite of schooling is availability of good quality infrastructure for imparting education. Hence a school must be attractive in terms of its environment. However, the data in the tables that follow do not give a very positive picture of the infrastructure facilities available in the schools of Punjab.

Table 27
Count of Facilities Required in Primary/Middle/Secondary/ Senior Secondary Schools, 1999

Level of School	Buildings	Toilets	Boundary Walls	Verandas	Playgrounds	Total Schools (Number)
Primary	676 (4.9)	10770 (78.2)	4995 (36.3)	3780 (27.5)	6147 (44.6)	13769
Middle	303 (13.0)	1552 (66.4)	1120 (47.9)	1107 (47.4)	1140 (48.8)	2336
High	138 (8.0)	640 (37.0)	480 (27.8)	545 (31.5)	508 (29.4)	1728
Senior Secondary	36 (4.3)	217 (26.2)	166 (20.0)	186 (22.4)	181 (21.8)	829

Source: Education Department, 1999
Note: Total schools also include the functional schools based on school level survey

The data in Tables 27 and 28 reveal that there are 676 schools (5%), at the primary level without their own buildings; 78 per cent require more toilets, 36 per cent boundary walls, 28 per cent verandas and 45 per cent require usable playgrounds. Further, there are only 76 per cent school buildings in good condition.

The remaining one-fourth of the buildings require urgent repair. Drinking water, which is a basic necessity, is also not available in 20 per cent of the schools. Further, only 31 per cent of the Government Primary Schools have the facility of toilets for girls and boys. At

the middle level, 13 per cent of the schools require buildings, 48 per cent boundary walls, 47 per cent verandas, 49 per cent playgrounds and 66 per cent require toilet facilities.

Although provision of such infrastructural facilities, as buildings, playgrounds, etc., at the secondary level were the priority areas to be met during the Seventh Plan itself, there are still eight per cent of secondary schools which require buildings of their own, 37 per cent require toilets, 32 per cent verandas and 29 per cent playgrounds. Similarly, at the senior secondary level, five per cent of the schools are without buildings and 26 per cent require toilets. Even at the 10+2 level where the children are grown-up and need to have privacy, there are no separate toilets for girls in a number of schools.

Table 28

Infrastructure Status Report of Government Primary School Including Branch Schools, 1998

District	School buildings in good condition	School buildings needing repair	Drinking water	Toilets for boys/girls available	Toilets for girls available	Total number of schools
Amritsar	834 (59.6)	565 (40.4)	1060 (75.8)	270 (9.3)	70 (5.0)	1399
Bathinda	373 (97.4)	10 (2.6)	320 (83.6)	187 (48.8)	37 (9.7)	383
Faridkot	195 (77.4)	57 (22.6)	197 (78.2)	111 (44.0)	41 (16.3)	252
Fatehgarh Sahib	349 (77.6)	100 (22.2)	377 (83.8)	118 (26.2)	49 (10.9)	450
Firozepur	1061 (84.8)	189 (15.1)	1015 (81.2)	395 (31.6)	166 (13.3)	1250
Gurdaspur	853 (55.1)	702 (45.3)	1001 (64.7)	262 (16.9)	138 (8.9)	1548
Hoshiarpur	1066 (83.0)	209 (16.3)	1090 (84.9)	266 (20.7)	93 (7.2)	1283
Jalandhar	774 (80.4)	195 (20.2)	883 (91.7)	371 (38.5)	167 (17.3)	963
Kapurthala	410 (76.5)	128 (23.9)	460 (85.8)	162 (30.2)	53 (6.5)	536
Ludhiana	871 (90.1)	126 (13.1)	917 (95.0)	528 (54.7)	273 (28.3)	965
Mansa	197 (70.6)	82 (29.4)	203 (72.8)	80 (28.7)	53 (18.9)	279
Moga	426	29 (6.4)	218 (47.9)	210 (46.2)	221 (48.6)	455
Muktsar	235 (75.1)	78 (24.9)	227 (72.5)	115 (36.7)	71 (22.6)	313
Nawan Shehar	332 (75.2)	108 (24.5)	384 (87.1)	130 (29.5)	38 (8.6)	441
Patiala	929 (80.7)	222 (19.3)	892 (77.5)	381 (33.1)	146 (12.7)	1151
Rupnagar	730 (80.8)	136 (15.0)	760 (84.1)	250 (27.6)	117 (12.9)	904
Sangrur	598 (70.5)	250 (29.5)	689 (81.3)	295 (34.8)	123 (14.5)	848
Total	**10233 (76.3)**	**3186 (23.7)**	**10693 (79.7)**	**4131 (30.8)**	**1886 (14.1)**	**13420**

Source: Education Department, 1998

Further information and data collected from the Directorate of Education too indicate that many of these buildings are in depilated conditions and have been declared unsafe for use as classrooms. The majority of the schools also face problems of shortage of

classrooms**.** The data reveal that 60 per cent of the primary schools and 58 per cent of the upper primary schools require additional classrooms. Further, 69 per cent of the secondary and 73 per cent of the higher secondary schools too are short of classrooms, although a programme for the construction of additional classrooms, to the extent they were deficient, was declared a major target in the National Policy 1986. The total number of additional classrooms required is 18,002 at the primary level, 4,150 at the upper primary, 4,091 at the secondary and 3,239 at the higher secondary level. There is also shortage of such basic necessities in the schools as blackboards, chalks and dusters. Nearly one-fourth of the sections do not have furniture even for the teachers. In 14 per cent of sections in the schools, the furniture/mats supplied for students are inadequate and in one-fourth there is absolutely no furniture, i.e., desk, bench, patre or even a mat for students. The data speak volumes about the state of infrastructure available in the schools.

In a nutshell, the condition of school buildings, basic amenities, availability of blackboard, furniture and playgrounds reveal that infrastructural facilities available at present in the schools of Punjab are poor. It is high time that our focus shifts to providing/upgrading/ optimally utilizing the existing infrasructural facilities in the schools.

A look at the current status of education in Punjab in terms of the national goals reveals that, in spite of a specific provision in the Constitution to endeavour to provide free and compulsory education up to the age of 14 and several explicit commitments with regard to the achievement of universal elementary education and improving secondary education, the progress so far has been way behind the target. In spite of the Policies on Education at the National Level and Programme of Action, the status of education in Punjab is not very impressive. In many cases, measures of reform could not be initiated because of lack of commitment, a positive attitude, planning and implementation.

Further there were faults at the stage of policy planning itself. The policy framework lacked the specificity required for evolving implementation strategies for a vast variety of situations existing on the ground. Hence, the commitment, which was to be fulfilled by the seventies/eighties, is still to be realized. There has been an uneven development of education not only between states but also between different castes and gender. Present schemes have not yielded significant results. A great many people, particularly educationists, feel that a large majority of the goals of the 1968 National Policy on Education still remain merely goals, even after the formulation of the 1986 and 1992 National Policy on Education.

Future Scenario

There are serious difficulties in presenting a comprehensive projection of the future because of inadequacy of data and lack of clarity about the overall future scenario. However, it would be adequate to present a broad picture, which might yield some insights into policy planning. Although it was projected that enrollment would slightly decline in the initial years, i.e., till the year 2001, but if the governments started to take action and seriously implemented their plans and policies, 'there will be acceleration of the programmes for the universalization of elementary education, which will increase the enrollment rate by 2006-07'. The likely scenario of the enrollment as projected by the Directorate of Education is given in Table 29.

Table 29
Projected Population and Accelerated Enrollment of 6-17 Age-group in Government Schools, 1991-2011 (in thousand)

Year	Projected population 6-17 age	Projected accelerated enrollment 6-17 age
1991	53.99	30.14
1996	60.46	29.78
2001	62.07	29.97
2006	60.63	35.27
2011	56.94	34.36

Source: Project submitted by the Education Department to the World Bank, 2002

'With increase in access to upper primary and secondary schools, improvement of facilities at the school level, trained teachers, community participation and the achievement of the other objectives of the SSA, there will be an increase in the enrollment and retention rates. Increase at the primary level will be only just more than marginal, but at the upper primary and secondary levels, it will be substantial. Increased incentives will further attract the children to government schools' (Proposal submitted to the World Bank by the Department of Education, 2002). In spite of the increasing craze for private schools in Punjab, if the government improves the quality of school education according to the recommendations made in the pages that follow, i.e., making education useful and relevant for children through curriculum revision, child-centred teaching-learning methods, improvements in educational provisions, value-education, teachers' training, teacher empowerment, change in the examination system and improving the infrastructural facilities, enrollment in government schools will be at least 70 per cent of school-age going children by the year 2007. 'The enrollment in only government schools is likely to increase from the present 30.19 lakh (2001) to 35 lakh in 2006 or 2007. The increased enrollment and retention at all levels will also increase the output of more secondary graduates. The share of private schools in total enrollment is not likely to reach more than 30 per cent from the present 25 per cent' (Proposal submitted to the World Bank by the Department of Education, 2002). However, the government has to depart from 'tokenistic' planning on models provided by the national planners and others and take initiatives involving experimentation with specific objectives at the grassroot, institutional and district levels. It is also necessary to develop an authentic system of monitoring, appraisal and evaluation to achieve our present targets and also to cater to the projected education scenario of the future.

On-going Education Programmes/Schemes

Access	Enrollment and Retention	Quality Improvement
Opening and upgradation of schools : Government has made efforts during the session 2001-02, and 1,404 schools have been upgraded, i.e., 468 from primary to middle level, 468 from middle to high and 468 from high to 10+2 level. The state government also plans to upgrade 200 more schools to middle, high and 10+2 level and open 50 new primary schools. Thus opening of new schools and upgradation of existing schools is being encouraged to achieve the goal of universal access to education. Total literacy campaigns and post literacy campaigns are in operation. A new Centrally sponsored scheme in the ratio 75:25 between the Government of India and the state has been introduced in 2001-02. Under this scheme, Alternative schooling is proposed to be provided for children in the 6-14 years age-group who were out of school. For this, 10,000 EGS centres are proposed to be set up.	Free and compulsory primary education. Attendance scholarship to SC girls. Mid-day Meal Scheme has been continuing in all districts since 1995. Three kg. wheat or two kg. rice is given for a period of 10 months per child. Free text-books to all the SC student and also to all girl children upto elementary level have been provided under SSA. Introduction of English from class-III. Appointment of para-teachers/siksha karmi. At present the state is hopeful of achieving universalization of elementary education within a decade through the Sarv Shiksha Abhiyan (SSA). SSA is a Centrally-sponsored scheme on a sharing basis between the GOI and the state government, with an objective to provide quality elementary education to all children and achieve Universalization of Elementary Education (UEE). The annual work plan for 2001-02 has been sanctioned Rs. 130 crores. The allocation on schemes is likely to increase in the coming years. The major thrusts in SSA are as follows: All 6-14 age group children in school by 2003. All 6-14 age group children complete five years of primary schooling by 2007. All 6-14 age group children complete eight years of schooling by 2010. Focus on elementary education of satisfactory quality with emphasis on education for life. Bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010. Universal retention by 2010. It has a holistic and convergent cafeteria approach, i.e., all the existing Centrally sponsored programmes of EE like Operation Black Board, Teacher Education, Non-formal education, Programme for Nutritional Support, Integrated Education for disabled children, Shiksha Karmi scheme and free education for girls, etc., have to be incorporated under this new framework of SSA. In addition to this, efforts and programmes of all the related departments have also to be dovetailed.	The scheme of Operation Black Board to improve school facilities by providing for more teachers, rooms and teaching/learning equipment. (Presently being clubbed with SSA) In-service training to JBT Teachers in DIETS: The scheme of strengthening teacher's education by establishing quality teacher training institutions, like District Institution of Education and Training (DIETS). 17 DIETS are functional. Strengthening and Improving Science Education in Schools : Pre-service and in-service training of teachers by SCERT (State Council of Education, Research and Training)

Achievements In Literacy and School Education

- The literacy rate has increased from 58.51 per cent in 1991 to 69.95 per cent in 2001, a rise of 11.44 per cent points during the last 10 years.
- The gender gap in literacy rate has decreased from 15.25 per cent points in 1991 to 12.08 per cent points in 2001. Female literacy has increased 13.14 per cent points as compared to only 9.97 per cent points in the case of males in the last decade.
- The rural-urban gap in literacy rate has come down from 19.31 per cent points in 1991 to 13.97 per cent points in 2001.
- There has been a quantitative expansion of educational institutions, with the total number of schools increasing from 9,394 in 1970 to 16,038 in 1980 and further to 18,998 in 2000-2001. Data suggest that the most massive expansion of schools has taken place at the primary level. At present, except for some remote areas, all villages have access to primary schools.
- Enrollment of students in recognized institutions has gone up from 30.6 lakh in 1980-81 to 36.61 lakh in 1991 and the figure touched 39.48 lakh in 2000. Enrollment of girls has shown considerable improvement
- Enrollment of SC students has consistently been increasing. Their numbers increased from 7.9 lakh in 1980 to 10.2 lakh in 1991 and 14.31 lakh in 2000-2001.

AREAS OF CONCERN IN LITERACY AND SCHOOL EDUCATION

- Allocation of resources in education is only 2.88 per cent as against the target of six per cent of the SGDP.
- At present 99 per cent of the expenditure on education at the primary level and 90 per cent at the secondary level is being spent on salaries, leaving very little for development in other spheres of education.
- Punjab's rank in literacy rate has come down from the 12th position in 1971 to the 16th position in 2001. There are still 95 lakh illiterates in the state (2001 Census)
- Except for few districts, the TLC programme has not functioned well in Punjab.
- The literacy rate of the Scheduled Caste population is very low, i.e., 41.09 per cent. Female literacy rate of Scheduled Caste women (31.03%) is almost half that of non-Scheduled Caste women (57.6%). The literacy rate of SC women is as low as 12 per cent in Bathinda, 16 per cent in Faridkot, 15 per cent in Ferozepur and 17 per cent in Sangrur. Government should, therefore, give priority consideration to female Scheduled Caste in this pocket in Punjab.
- According to the 1991 Census, nearly one-fourth of the population had studied in the primary level or below, nine per cent upto middle level and 10 per cent upto matriculation level. Only three per cent of the population had studied upto graduation or above.
- Sixty-one per cent of the villages do not have an elementary section.16 per cent habitations do not have access to a middle school even within the norm of three km. If we have to achieve our aim of universalizing elementary education, 100 per cent accessibility to elementary schools will have to be provided. Further, there is also shortage of secondary and senior secondary schools within the normative distance.
- One-fourth of the children in the 6-11 age group and more than 31 per cent in 11-14 age group are still not enrolled, or are enrolled in unrecognized schools.

- Share of government schools in total enrollment in primary classes in gradually decreasing and has come down from 71.86 per cent (1996) to 66 per cent (2000), whereas there has been a larger growth in the share of unrecognized private schools, which has now increased from 19 per cent to 25 per cent in the last four years. It reflects the discontent of the public with government run schools.
- Although Punjab has reduced the dropout figures to some extent, this rate is still very alarming, as 20 per cent of the children dropout at the primary level, 37 per cent at the middle level, 40 per cent at the secondary level and 78 per cent at the 10+2 level. It is a shocking fact that out of 100 children enrolled in class I, only 22 reach senior secondary level.
- The percentage of Scheduled Caste enrollment at the primary level is 43.84 per cent of the total students. It has come down to 32.89 per cent at the middle level and to 21.18 per cent at the secondary level. This reflects a very high dropout rate among Scheduled Castes, as they move to higher levels of education.
- The number of out-of-school children is also quite high. At present 2.97 lakh children in 6-14 age group and 10.52 lakh children in 14-18 age group are out of school.
- There is no non-formal education centre at present for children in the age group 6-14 and no alternative schooling in the state for out-of-school children in the age group 14-18 years, except for one at the matric level. That is why in Punjab open school has hardly been able to cover one per cent of the out-of-school children.
- There are significant inter-district disparities in teacher- pupil ratio. In some districts, such as Muktsar, Mansa and Moga, the teacher-pupil ratio at the primary level is more than 50 students per teacher as compared to other districts where the ratio varies between 31 to 40. Further there are many schools in Punjab where there is no, or only one sanctioned post of a teacher, head teacher or centre head teacher.
- The quality of teaching in schools can be judged by the poor results of the students. At present there is 50 per cent failure of students at the matriculation level.
- There are lack of infrastructural facilities and civic amenities in the schools.
- The heavy syllabus prescribed and the system and examination of awarding marks in most of the school are adversely affecting the quality of school education and the creativity of students. Schools with no, or a single post sanctioned for a teacher and problem of teachers' absenteeism are other threats to quality of school teaching.
- Five per cent buildings are required at the primary level, 13 per cent at the middle, eight per cent at the high and five per cent at the senior secondary level. Besides the building-less schools, there are many other schools where buildings, need urgent repair. Many of these buildings are in dilapidated conditions and have been declared unsafe for use as classrooms. The majority of the schools are also facing the problem of shortage of classrooms, toilets, playgrounds, boundary walls, verandas etc.

RECOMMENDATIONS (LITERACY AND SCHOOL EDUCATION)

To achieve the targets of elementary and secondary education, we need to take the following steps:

1. **Optimal upgradation of primary schools to elementary level and secondary schools to senior secondary level:** The state has nearly achieved universal access to primary schools, except in certain Mand/Border/Kandi and Bet areas. Special strategies like the Education Guarantee Scheme (EGS) should be envisaged for these remote areas without accessibility to basic primary education. The focus should be now on achieving universalized accessibility at the elementary level and easy accessibility at the secondary level, by optimally merging the number of schools under two categories instead of four, i.e., one at the elementary level and the other at the secondary level. The government should make efforts to upgrade the maximum number of primary school to the elementary level and the secondary schools to senior secondary level, rather than creating totally new infrastructure. The expansion in the number of schools should be middle upwards. This has also been recently accepted as a major target by the state government (Punjab Education Policy, 2002). But how far it is implemented, is the real issue.

2. **Rationalization and redistribution of staff:** At present, a major chunk of the expenditure on education is on salaries/state liabilities, leaving very little for actual development in education. The state government should try to utilize optimally the expenditure. Staffing in Punjab needs to be redistributed, restructured and rationalized. It is very important to upgrade the primary schools to middle level, so that the shortage of teachers at the former is compensated by the excess at the latter, the teacher-pupil ratio being lower at the middle level than at the primary level. The merging of the two levels will help in rationalizing the manpower required upto the elementary level. The secondary level should also be optimally upgraded to the senior secondary level. It seems that the total number of teachers recruited is not so much of a problem, the need is to ensure their proper and rationalized deployment. The convergence and merger of the four branches of education into two will reduce the workload of the education department and help in redistributing the number of teachers required at different levels.

3. **Focus on pre-service/in-service teachers' training**: The government should enhance the competency and skills of the teachers by promoting pre-service and in-service training for them. DIETS (District Institution of Education and Training at elementary level)/GISTC's (Government In-service and Training Centres at secondary level) and other training institutions must be optimally utilized for this purpose. Such pre-service and in-service training programmes should be constantly reviewed and strengthened, as its quality has a direct bearing on the quality of education in the state.

4. **Rationalizing teacher transfers**: Transfer of teachers in Punjab is not merely an administrative problem but also hits at the very core of the quality of education. One of the reasons for non-enrollment/dropouts is the single–teachers and teacher-less schools and persisting absenteeism. Influential teachers get themselves transferred to convenient locations, leaving behind a bunch of

schools which do not see the face of a teacher for months/years. So the need of a rational and transparent transfer policy cannot be over emphasized. The new education policy released by the state sets guidelines for teachers' transfers for the first time. These guidelines, which are pragmatic and practical, must be adhered to and implemented by the state.

5. **Focus on teacher empowerment:** The critical role of teachers in the entire education set-up must be realized. Emphasis should be made to address their professional development needs. Processes should be set up to initiate a participative mode for the teachers in the development of curriculum, text-book, teaching-learning material and methodologies. However, simultaneously the teachers have to be made more responsible and performance-oriented.

6. **Setting up an academic council:** There is need for an autonomous multi-member academic authority to undertake sample studies to collect data about the functioning of institutions and learning capabilities of students. It is necessary to make the education system more transparent. Action-research and policy development should be other concerns of this council. Members should include educationists, PRIs and school representatives, preferably teachers.

7. **School heads**: It is strange to note that there is no post of a headmaster in a middle school and some of the primary schools also function without any head. Apart from the non-availability of the post of a head, it is also the aptitude/attitude and vision of the school head which has a direct bearing on the quality of education. The present system of promotion for school headship is outdated. Teachers at the fag end of their service, when they prepare themselves for the bliss of retirement, get promoted to school headship. By that time they neither have the zeal nor the stamina to make any impact on the school under their charge. Moreover from teaching they are just thrown into an entirely new field of work which requires altogether new skills. So, not only must every school, have its head, but they must be sufficiently young, with enough years of service ahead in which they may translate their vision of the school into reality. The new education policy of the state has come out with such a programme, which must be implemented without delay.

8. **Revamping the curriculum:** There should be a special thrust to make education at elementary level useful and relevant for 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 Punjab. Hence modernization of the syllabus with more flexibility in the choice of subjects is recommended. Curriculum framework should be based on compulsory and flexible subjects, wherein the children have the choice to opt for the subject of their interest. It will help in reducing the weight of the school bag. It is recommended that the subjects, which do not have practical value in day to day life could be listed as optional. In fact there should be a continuous review of the utility of the curriculum from time to time. Further, there is need to emphasize on moral values and iterate their importance in everyday life.

9. **Need for reforms in examination/evaluation system:** It is important to review the current examination system and consider possible alternatives of bringing reforms in it. At present, the emphasis in education is on theory which is

encouraging rote-learning without basic understanding. More practical work and activities should be encouraged, which would also discourage mass copying and rote-learning. It will be appropriate to adopt a regular grading system and emphasize on the year-long classroom work, instead of evaluating only on the basis of annual examinations. This will increase the attendance rate and the knowledge of the students.

10. **Provision of infrastructure/optimum utilization of the existing infrastructure:** Efforts should be made to bridge the infrastructural gaps. Schools should raise resources through voluntary organizations and panchayats, with the state government providing matching grants. The state should also endeavour to optimize utilization of existing infrastructure in schools, by merging the school education at two levels--elementary and secondary-- which would help in maximizing the utilization of the existing infrastructure. Introducing a shift system and using the existing buildings and teachers for open learning/non-formal education in the evening are the other methods of utilizing the existing infrastructure.

11. **Changing the mindset of parents**: As far as the social and cultural handicaps of enrollment and retention of girls in schools is concerned, the NGOs and PRIs need to be associated effectively to initiate an attitudinal change in the parents of the girl child.

12. **Enhance incentives to all children in government schools**: The various incentives being provided by the government should be for all children, irrespective of caste criteria (as being adopted today) to achieve the goal of universalization of education.

13. **Promoting free lunch**: Interaction with the parents in the various districts of Punjab and the government machinery of the departments concerned have led to the recommendation that, although the mid-day meal scheme is not achieving the desired results and encourages the children to sell off wheat on the way from the school to their homes, it is felt that some sort of packed, cooked and nutritious food should be supplied to children to attract them and retain them in the schools.

14. **Adult literacy programmes should be merged with SSA:** This will help in effective functioning and optimum utilization of resources. There should be timely release of the Centre's and the State's share of funds and regular monitoring of these programmes at the state as well as district level.

15. **English should be started in class 6:** According to the new Education Policy of the state, the English language has to be started in class 3 in government schools. But it is strongly felt that it is difficult for the child to bear the burden of an additional language at such a tender age. His understanding capacity is limited in the formative years and, therefore, it is strongly recommended that English should be started in class 6 and not in class 3. The English language cannot be avoided, but emphasizes needs to be given to the mother tongue, especially in the formative years.

16. **Village as unit of planning:** To initiate a community-based approach, village should be the lowest unit for planning education. Village plans should converge to form the District Educational Plans.

17. **Decentralization 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 a bid to empower the community and other stakeholders. It is essential that control of schools and teachers should be transferred to local bodies, which have a direct interest in teachers' performance. Efforts should be made to involve the community in education development through VEDCs. The state's efforts at decentralizing powers to VEDCs for running the SSA programmes in villages should be replicated in other educational programmes too. Decentralization will actually be achieved only when the panchayats, VEDCs and UEDCs become fully autonomous, with full financial powers to plan, manage and control the school affairs. It is also important to enlarge and strengthen the role and participation of PTAs/MTAs in schools.

18. **Increased allocation/resource mobilization for education:** The state should substantially increase public investment and encourage and private investments in education, so that it rises to six per cent of the national income by the year 2007. It is, however, important that money is spent on increasing access to schools, infrastructure, monitoring, inspection, management and development of education rather than merely on salaries.

19. **Private initiatives have to be facilitated:** In recent times, a tendency has developed in people to send their children to private schools. There is need to facilitate and encourage private bodies to share the responsibility with government. It is, however, very important to ensure that minimum standards of quality of education are maintained in the private schools.

20. **Monitoring and evaluation:** An institutionalized mechanism has to be set up for regular inspection, monitoring and follow-up. A school gradation and evaluation system, initiated by the state from this year, is a welcome step, which needs to be institutionalized. A similar system of appraisal of teacher and school heads must also be put in place. One needs a local-level body or institution to monitor the performance of teachers.

21. **Participative field studies should be undertaken:** At present not much research on education is being undertaken in Punjab, at the grassroots level. So, to identify the requirements of planning, measure the effectiveness of various schemes, evaluate the measures undertaken by the state to improve quality of education and curriculum, it is important to expand research, which will reveal the ground realities. Government should also probe into such areas as relevance of education in daily life and public perception of government schools.

II

HIGHER EDUCATION: HISTORICAL BACKGROUND AND DEVELOPMENT

Historical background

Independent India inherited a higher education system with strong colonial legacies. The planners of India were, therefore, faced with the immediate challenge of bringing about a basic transformation in its educational system to fulfill the developmental needs of the country. The educational planners had recognized the bi-directional linkages between education and development. The need for a literate workforce was considered to be as essential in this context as the education and training of an adequate pool of highly skilled manpower. Considerable emphasis was also given to higher education to strengthen the educational system as a whole, and particularly to scientific and technological components therein, so as to meet the requirements of high-level capabilities in the realm of knowledge as well as skills. To achieve these objectives, the University Grants Commission (UGC) was set up as the apex national organization concerned with the establishment and maintenance of standards in higher education. The UGC acts as a vital link between the policy-making bodies of the government and institutions of higher education (Raza, 1991, pp.32-33). Some of the recommendations of different commissions on education (given below) which have influenced policies, planning and development in higher education, are discussed in this section:

- Report of the University Education Commission, 1948-49.
- Report of the Education Commission, 1964-66.
- National Policy on Education, 1968.
- National Policy on Education, 1986.
- Education Reforms Commission, Punjab, 1985.

The broad areas and recommendations on higher education and their institutions concerned, covered by these commissions, are: (1) aims and objectives of institutions of higher education; (2) their management and governance; (3) assuring quality and standards in these institutions; (4) achieving equity and access through them; (5) their funding pattern; and (6) reforms in the existing system and distance higher education, etc. National Policy on Education (1968) reinforced the recommendations of the Education Commission (1964-66) on reconstruction of education to relate it more closely to the life of the people, in the context of (a) continuous efforts to expand educational opportunities; (b) a sustained and intensive effort to raise the quality of education; (c) emphasis on development of science and technology; and (d) cultivation of moral and social values. Later, the National Policy on Education (1986) visualized that higher education should become dynamic with the (a) consolidation and expansion of institutions, (b) development of autonomous colleges, (c) re-designing of courses, (d) training of teachers, (e) strengthening research, and (f) improvement in efficiency and management.

Basic Problems of Higher Education

As higher education in the country, as well as in Punjab, grew in size, its problems and prospects too increased both in numbers and size, and its relevance to development and especially to the socio-economic needs of the society increasingly became issues of debate. Comparing the situation of higher education in other states and at the all-India level, its development in Punjab is seen to be relatively superior. But there are problems,

such as imbalanced and unplanned institutional growth, lack of infrastructural facilities, excessive and discriminatory system of admissions, financial constraints, placement of degree holders, irrelevant course content and gap between general and professional courses. Hence, there is need for various changes, modifications, adaptations, orientations and innovations.

Development of Higher Education

Punjab has a long history of higher education -- whether formal or non-formal -- of a traditionally progressive and forward-looking educational system. The reorganized state of Punjab (1966) has experienced a large number of changes in its size, social fabric and economy. These are directly linked with the development of education in the state. The structure and system of higher education in the state has followed the national pattern, such as college and university education in general and professional degrees. The current position of higher education in Punjab, although, considered as the core sector for achieving the objective of employment for an individual, is also oriented towards socio-economic, environmental, and human resources development.

Status of (General and Professional) Higher Education: Trends

Universities: The development of university education has been examined in Table 30.

Table 30
Growth of Universities

Years	Universities*		
	General	Technical,** Medical, Veterinary*** and Agriculture	Total
1971-1980	3	1	4
1981-1990	3	1	4
1991-2000	3+	4	7

Source: *Statistical Abstract of Punjab 2001-2002,* Economic Advisor to Govt. of Punjab, Chandigarh, PP. 510-512, and Department of Higher Education, Punjab, Chandigarh (Unpublished)

Notes: * Amritsar-1, Jalandhar-1, Ludhiana-1, Faridkot-1, Patiala-1, Talwandi Saboo 1, and + Chandigarh-1

** providing degrees — B.E, B.Tech, B.Arch, B.B.A, B.C.A, M.C.A and M.B.A. through professional colleges.

*** providing degrees — M.B.B.S, B.D.S, B.A.M.S, B.Sc (Nursing), B.H.M.Sc, M.Sc/M.S/M.D, etc., and degrees in veterinary sciences through universities departments or professional colleges.

Seven universities serve Punjab. Panjab University, Chandigarh, Punjabi University, Patiala and Guru Nanak Dev University, Amritsar, impart general as well as professional education. The range, diversity and sophistication of subjects offered by these universities are the same as anywhere in the country. Punjab Agriculture University at Ludhiana is well known for its contributions to education, research and extension services in the field of agriculture. Punjab Technical University at Jalandhar, Punjab Medical University at Faridkot, and Punjab Veterinary University at Talwandi Saboo are in the process of being established exclusively for technical education, medical and veterinary sciences. In addition, there exists another institution offering higher learning in medicine, namely, the Postgraduate Institute of Medical Education and Research,

Chandigarh. These universities and institutes are autonomous bodies, created by Acts of State/Central Legislatures. Punjab University and the Postgraduate Institute of Medical Education and Research, Chandigarh, are both in a slightly different position, in respect of their governance and financial aids or grants. Since, they also serve Punjab, as such, it would be legitimate for us to include a reference to these matters in the discussion here.

In quantitative terms, the increase in the number of institutions of higher education in Punjab has been spread equally across universities imparting arts/sciences/commerce, technical and professional education. The facilities they provide, however, appear to be inadequate to meet the present requirement, especially for the population of rural areas, as these are all located in urban areas. In qualitative terms, standards of attainments of most of these universities are comparable with that elsewhere. Nevertheless, there is need and scope for further improvement in respect of their goals and pursuit of excellence. Views of the members of the faculty, administrative staff and students of different universities highlight great scope for introducing changes in higher education, for improving the performance of the system and making it more relevant to the needs of the day. The structure of governance of the universities in Punjab has followed the pattern evolved by other universities in the country, and based on the model developed in Europe. Hence here is no need to suggest any change in the university structure, but it is imperative to follow a pattern, which has international acceptance.

Colleges

There are a sufficient number of colleges in the state and most of them are affiliated to one or the other of the seven universities of Punjab. Table 31 highlights the growth of colleges during the last three decades.

Table 31
Distribution of Recognized Colleges according to Courses of Study

Years	Arts, Science, Commerce and Home science Colleges			Engineering, * Technology and Architecture Colleges			Medical (Allopathic only) and Veterinary Colleges			Teachers Training Colleges (B.Ed)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1971-80	110	52	162	3	-	3	5	-	5	12	6	18
1981-90	118	53	171	3	-	3	5	-	5	12	6	18
1991-00	131	73	204	16	-	16	6	-	6	13	9	22

Source: *Statistical Abstract of Punjab 2001*, Economic Advisor to Government of Punjab, Chandigarh, PP. 510-511

Note: * Perspective Plan of Department of Technical Education, on Industrial Training, *Punjab-Vision 2020 Report* defined 19 Engineering Colleges, 41 Polytechnics/Institutions including Pharmacy Institutes and 129 Industrial Training Institutes in Punjab

Undergraduate teaching is mostly undertaken in the affiliated colleges (whether government, private aided or private unaided). Though these colleges mostly confine themselves to undergraduate teachings, some also offer postgraduate courses. Besides, some universities also provide education facilities at graduate and postgraduate levels, through correspondence courses and evening colleges.

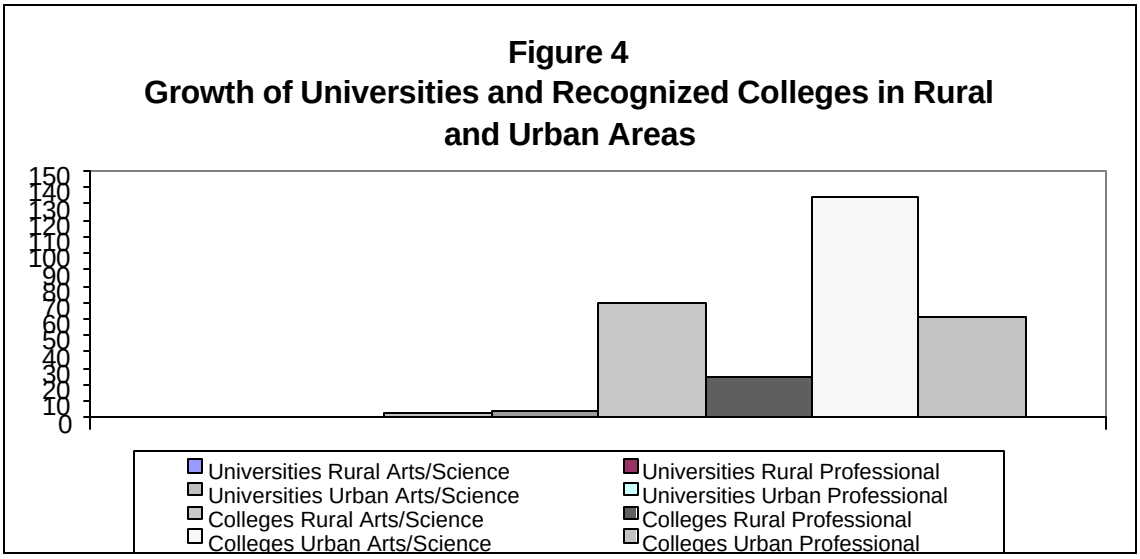
Figures in Table 32 show considerable gap between the existing numbers of rural and urban colleges in Punjab. The ratio between urban and rural colleges is nearly 1:2 as calculated from the given data.

Table 32
Number of Recognized Colleges Located in Rural and Urban Areas

Colleges	1998			1999			2000		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
Arts, science, Home science including and Commerce	63	130	193	64	132	196	70	134	204
Teachers training	3	17	20	3	18	21	4	18	22
Medical/Para-medical	6	21	27	4	20	24	11	26	37
Agriculture	--	2	2	--	2	2	--	2	2
Engineering/Architecture	8	8	16	8	8	16	9	7	16
Veterinary Sciences	--	1	1	--	1	1	--	1	1
Physical education	1	2	3	1	2	3	1	2	3
Oriental*	--	2	2	--	2	2	--	2	2
Total	**81**	**183**	**264**	**80**	**185**	**265**	**95**	**192**	**287**

Source: *Economic Survey of Punjab 2001,* Director, Public instructions, Colleges, Punjab
Note: *Sanskrit Mahavidhyalyas

Figure 4
Growth of Universities and Recognized Colleges in Rural and Urban Areas



Source: *Economic Survey of Punjab 2001,* Director, Public instructions, Colleges, Punjab, 2002.

Along with the growth in numbers of universities, there has been a corresponding growth in numbers of affiliated colleges. The number of colleges of general education (Arts, Science, Commerce and Home Science) increased from 162 in 1971-80 to 204 in 1991-2000. Similarly, during the same period, colleges of engineering and technology, medical colleges and colleges of teachers training increased from 26 to 83. This increase in numbers reveal unplanned and unbalanced institutional growth. Imbalances have been observed even in the expansion of faculties, with a greater number of arts, science and commerce colleges than other professional degree colleges. This imbalance in institutional growth calls for serious attention. District-wise information regarding the establishment of colleges is given in Table 33.

Table 33
District-wise Status of Recognized Colleges according to Courses of Study (2000-2001)

Districts	Arts, Science, Commerce and Home science Colleges			Engineering, Technology and Architecture Colleges			Medical (Allopathic only) Colleges			Teachers Training Colleges (B.Ed)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Gurdaspur	9	7	16	1	-	1	-	-	-	1	-	1
Amritsar	13	7	20	-	-	-	2	-	2	1	1	2
Kapurthala	11	6	17	-	-	-	-	-	-	1	1	2
Jalandhar	12	8	20	1	-	1	-	-	-	2	-	2
Nawan Shehar	4	3	7	1	-	1	-	-	-	-	1	1
Hoshiarpur	12	5	17	-	-	-	-	-	-	1	-	1
Rupnagar	7	2	9	2	-	2	-	-	-	-	-	-
Ludhiana	14	16	30	2	-	2	2	-	2	2	4	6
Ferozepur	8	3	11	1	-	1	-	-	-	1	1	2
Faridkot	2	-	2	1	-	1	1	-	1	1	-	1
Mukatsar	4	3	7	1	-	1	-	-	-	1	-	1
Moga	4	3	7	1	-	1	-	-	-	1	1	2
Bathinda	5	4	9	1	-	1	-	-	-	-	-	-
Mansa	3	1	4	-	-	-	-	-	-	-	-	-
Sangrur	10	3	13	1	-	1	-	-	-	-	-	-
Patiala	10	2	12	2	-	2	1	-	1	1	-	1
Fatehgarh Sahib	3	-	3	1	-	1	-	-	-	-	-	-

Source: *Statistical Abstract of Punjab 2001,* Economic Advisor to Government of Punjab, Chandigarh

STATUS OF TECHNICAL AND PROFESSIONAL (VOCATIONAL) EDUCATION

Besides the above professional institutions, it is imperative to discuss briefly the technical institutions, such as polytechnics and Industrial Training Institutes that impart technical and industrial training as well as paramedical and veterinary sciences education. The Department of Technical Education and Industrial Training looks after 16 engineering colleges (13 government and three affiliated private and three private), 41 polytechnics/ institutions including Pharmacy (diploma level institutions), and Hotel Management institution and about 129 industrial and vocational centres at the ITI level. Every year a total of about 2,800 engineers, 5,300 diploma holders and about 16,800 craftsmen at the certificate level are being trained by these technical institutes. Besides, three engineering colleges, seven polytechnics and 33 new industrial training institutes are in the pipeline at various levels of establishment in the state.

The Directorate of Medical Education and Research, Punjab, governs medical education and research in the state. The directorate was set up to develop medical manpower and to ensure that medical education and teaching hospitals received adequate attention and proper facilities for research in various branches of medicine. To develop super-specialists, teachers from the level of senior lectures and above are sponsored to the Post-graduate Institute of Medical Education and Research, Chandigarh and the All India Institute of Medical Sciences, New Delhi, for postgraduate courses (*Annual Plan-2001,* Punjab). These developments indicate that the Government of Punjab considers professional education, and especially industrial training, as high priority. In the circumstances, action needs to be initiated on different fronts to make the technical education system responsive to the needs and requirements of industry. Participation of the private sector needs to be encouraged for continuous up-gradation and expansion of HRD facilities. Keeping in view the expansion of technical higher education, besides the

promotional activities of Punjab Technical University in the field of professional education it is necessary to establish a higher-level apex body like IIT as a separate unit.

Status of Students' Enrollment and Placement

Table 34 shows the fast growth of enrollment of students between 1971 and 2000 and this indicates the high demand for more institutions of higher education.

Table 34
Growth of Students' Enrollment

	Postgraduate Students			Graduate Students		
Years	Total enrollm-ent	Increase over the preceding Decades	Decade's-percentage increased	Total enrollment Increased	Increase over preceding decades	Decade's-percentage increased
1971-80	6901	-	-	84353	-	-
1981-90	7313	412	6.0	86501	2148	2.54
1991-2000	13848	6535	89.3	179817	93316	107.88

Source: *Statistical Abstract of Punjab–2001,* Economic and Statistics Organization, Punjab

The data reveal that the number of enrollments at the postgraduate and graduate levels has increased from 6,901 to 13,848 and 84,353 to 1,79,817 within three decades. Further, the decade 1991-2000 shows manifold increase in enrollments. The contradictions of the current position of fast expansion at degree level, especially in arts, science and commerce courses, are shown in Table 35. The high rate of students' enrollment in various courses also highlights inaccessibility to job opportunities.

Table 35
Number of Students in Different Courses of Study

Years	Ph.D			M.Phil @			M.A			M.Sc		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1971-80	56	46	102	138	140	278	2852	2985	5837	338	319	657
1981-90	74	74	148	263	355	618	2176	3115	5291	500	636	1136
1991-2000	102	170	272	18	51	69	3421	7553	10974	580	1349	1929

Continued…

Years	M.com			B.A/B.A (Hons)			B.Sc/B.Sc (Hons.)			B.Com/B.Com (hons)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1971-80	22	5	27	33436	27535	61071	7780	3395	11175	5162	324	5486
1981-90	61	59	120	26590	33867	60457	5175	4457	9632	5955	2714	8669
1991-2000	153	441	594	56218	67037	123255	7207	8380	15587	11536	10027	2156

Continued...

Years	B.E/B.Sc (Eng.) B.Arch./B.Tech			M.B.B.S			B.Ed		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1971-80	1676	31	1707	1629	587	2216	1009	1689	2698
1981-90	1943	168	2111	1312	990	2382	1007	2243	3250
1991-2000	10787	2444	13231	1327	1186	2513	1079	2589	3668

Source: *Statistical Abstract of Punjab 2001;* Economic Advisor to Government of Punjab, Chandigarh, pp. 520-524

Note: @ The decrease of enrollment in M.Phil is due to closing of M.Phil classes in Punjabi University, Patiala and GND University, Amritsar

A high percentage of enrollment in arts and science colleges (89.25%) is evident from Table 35-A. It also indicates a high rate of incidence of unemployment among non-technical graduates and undergraduates.

Table 35 A
Course-wise percentage of Enrollment

Courses	Percentage
Arts and science colleges	89.25
Teachers training colleges	1.49
Medical colleges	2.92
Agriculture colleges	0.46
Engineering colleges	5.29
Veterinary colleges	0.25
Physical education colleges	0.27
Oriental colleges	0.07

Source: *Economic Survey of Punjab 2001-2002*; Economic Adviser Government of Punjab, Chandigarh, P. 36 and P. 153

In practice, near about 80 per cent of the total students are compelled to take admission at degree level in arts, science and commerce subjects. This is because such courses are not organized on the basis of established manpower needs and demands by various developmental sectors. Hence, there is need to restructure the admission system in different courses to improve the status of employability of graduates and postgraduates. Besides, there should be two streams of courses--vocational and general--at the first-degree level, at least for the next two decades or so, as an interim measure. (The Education Commission 1964-66 has already given this suggestion). This endeavor may help in reducing the unwanted rush of students for higher-level arts/sciences courses. Provision for offering courses of functional utility, with a vocational bias, may be helpful to those who wish to end their studies with a pass degree and are not willing to pursue further education. Vocationally motivated students could then find gainful employment or be self-employed in vocations of their own choice after the completion of +2 school stage. If they wish to continue their education, they may go in for general education, or may proceed to polytechnics for diploma or certificate courses in technical, professional or any other skill-formation courses. Therefore, vocational courses at the first-degree level need to be enriched and diversified. By this effort, government or private institutions would definitely reduce the educated unemployment level and equip students for self-employment, while giving the highest priority to vocational sectors.

District-wise enrollment of students in postgraduate and graduate courses as given in Table 36 show the trend and pattern of enrollment in different faculties.

Table 36
District-wise enrolment of Students in Different Courses of Study (2000)

Districts	Ph.D			M.Phil			M.A			M.Sc		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Gurdaspur	-	-	-	-	-	-	37	241	278	-	-	-
Amritsar	61	68	129	5	19	24	366	1012	1378	278	555	833
Kapurthala	-	-	-	-	-	-	74	213	287	-	-	-
Jalandhar	-	-	-	-	-	-	440	1633	2073	140	261	401
Nawan Shehar	-	-	-	-	-	-	15	20	35	-	-	-
Hoshiarpur	-	-	-	-	-	-	554	998	1552	4	6	10
Rupnagar	-	-	-	-	-	-	60	106	166	-	-	-
Ludhiana	-	24	24	-	-	-	1011	2050	3061	11	144	155
Ferozepur	-	-	-	-	-	-	114	190	304	-	-	-
Faridkot	-	-	-	-	-	-	44	45	89	-	-	-
Mukatsar	-	-	-	-	-	-	48	22	70	-	-	-
Moga	-	-	-	-	-	-	-	-	-	-	-	-
Bathinda	-	-	-	-	-	-	20	41	61	24	-	24
Mansa	-	-	-	-	-	-	21	4	25	-	-	-
Sangrur	-	-	-	-	-	-	123	77	200	-	-	-
Patiala	41	78	119	13	32	45	490	882	1372	123	383	506
Fatehgarh Sahib	-	-	-	-	-	-	4	19	23	-	-	-

Continued…

Districts	M.com			B.A/B.A(Hon.)			B.Sc/B,Sc(Hon.)			B.com/B.com (Hon.)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Gurdaspur	21	36	57	4230	6951	11181	1009	1105	2114	724	603	1327
Amritsar	29	89	118	4274	6002	10276	1416	1566	2982	1526	1220	2746
Kapurthala	-	-	-	1997	3879	5876	103	103	206	407	565	972
Jullandhar	45	132	177	4710	8430	13140	1051	783	1834	1841	1362	3203
Nawan Shehar	9	10	19	1438	1841	3279	91	116	207	268	190	458
Hoshiarpur	1	8	9	4542	5131	9673	616	672	1288	714	576	1290
Rupnagar	-	-	-	2193	1745	3938	188	225	413	357	283	640
Ludhiana	26	42	68	6856	14056	20912	868	1742	2610	2118	2377	4495
Ferozepur	-	-	-	4306	3151	7457	301	430	731	359	351	710
Faridkot	-	-	-	1436	467	1903	115	130	245	497	227	724
Mukatsar	-	-	-	1809	1655	3464	90	102	192	190	26	216
Moga	-	-	-	2072	2100	4172	98	119	217	168	188	356
Bathinda	-	-	-	3273	1862	5135	593	421	1014	593	421	1014
Mansa	-	-	-	1306	636	1942	-	-	-	171	114	285
Sangrur	-	-	-	5450	3278	8728	375	319	694	425	364	789
Patiala	22	124	146	5399	4923	10322	248	455	703	996	1012	2008
Fatehgarh Sahib	-	-	-	927	930	1857	43	92	137	182	148	330

Continued…

Districts	B.E/B.Sc (Eng.) B.Arch./B.Tech.			M.B.B.S			B.Ed.		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Gurdaspur	799	208	1007	-	-	-	27	33	60
Amritsar	-	-	-	456	454	910	85	284	369
Kapurthala	-	-	-	-	-	-	106	204	310
Jullandhar	896	154	1050	-	-	-	130	200	330
Nawan Shehar	119	42	161	-	-	-	-	100	100
Hoshiarpur	-	-	-	-	-	-	151	149	300
Rupnagar	937	321	1258	-	-	-	-	-	-
Ludhiana	1015	169	1184	327	284	611	175	825	1000
Ferozepur	841	137	978	-	-	-	136	304	440
Faridkot	566	194	760	109	97	206	35	45	80
Mukatsar	528	130	658	-	-	-	56	44	100
Moga	548	124	672	-	-	-	113	286	399
Bathinda	830	279	1109	-	-	-	-	-	-
Mansa	-	-	-	-	-	-	-	-	-
Sangrur	1876	341	2217	-	-	-	-	-	-
Patiala	1272	239	1511	435	351	786	65	115	180
Fatehgarh Sahib	560	106	666	-	-	-	-	-	-

Source: *Statistical Abstract of Punjab 2001*; Economic Advisor to Government of Punjab, Chandigarh,

The data show that there is an increasing interest among pupils towards technical and vocational education. The increased number of technical and professional institutions, as shown in previous tables, indicates that the Department of Education and Universities has started different professional courses, which have been gradually on the increase during consecutive decades. The data also reveal that the enrollment in professional streams is gradually increasing, with a corresponding decrease in general education in both rural and urban areas, as well as among male and female students.

Figures on enrollment indicate that the growth of graduates in Commerce has increased faster in the previous decades than that of Arts and Science courses. This shows the students' interest in professional courses, especially Commerce, which generates better job opportunities for professionals, in both public and private sectors (especially in industrial and banking sectors). Data reveal that higher numbers of students are interested to enter professional courses at the postgraduate level than the graduate level. No comprehensive studies are available about wastage and stagnation at higher levels of education in Punjab. Small sample studies have, however, been conducted by some scholars, who have come to the conclusion that wastage and stagnation are particular characteristics of the modern system of general education. This has generated frustration among students, parents and teachers. The situation worsens further when unsuccessful dropouts are compelled to enter the employment market, which does not have ready jobs even for successful first-graders. So, higher numbers of failures on the one hand and low standard of academic performance on the other have reduced the efficiency of higher education. This situation is also true of Punjab and, therefore, needs serious attention.

Concerned with higher education and placement of students, the Education Commission 1964-66 recommended the need to strengthen linkages between higher education and productivity, which leads to socio-economic development. There is no follow-up record of higher-level degree holders available in published or unpublished form; therefore, it is difficult to assess the social and economic relevance of higher degrees. The existing

educational system has not undergone any change, nor has it any direct linkage with the socio-economic needs of the people. Hence, a tremendous gap has developed between the supply and demand of an educated workforce. In this context, some studies highlight a large surplus of degree holders who could not fined a suitable place in the employment market, since they do not possess the relevant education or skill formation needed on the job market.

RELEVANCE AND ACCESS OF HIGHER EDUCATION TO THE DISADVANTAGED

The Education Commission (1964-66) rightly stated, 'Indian society is hierarchical, stratified and deficient in vertical mobility. The social distance between the different classes, particularly between rich and poor, the educated and the uneducated, is large and is tending to widen ...' Similar is the situation in Punjab, and this complex character of the population affects the socio-economic development of the state. People living in rural areas, and especially Scheduled Castes and Backward Castes and other economically weaker sections of society, are exploring the same educational opportunities as the other castes, because of lack of financial support. Although the number of women students in all the subjects at the higher level is increasing relatively in successive decades, the equality of women and men remains an issue of debate in relation to higher education. This demands immediate attention. In this context, the National Policy on Education (1986) has rightly emphasized the need for removal of disparities and equalization educational opportunities for all sections of society. Table 37 shows the gap between total enrollment and that of women and Scheduled Castes. In Punjab, the Scheduled Castes population is more than 33 per cent, but comparatively, their enrollment at postgraduate and graduate levels is significantly low. Their enrollment in different courses of studies is quite uneven, such as 86.27 per cent in arts/sciences/commerce, 2.93 per cent in teachers' training, 4.30 per cent in medical and paramedical sciences, 0.54 per cent and 5.03 per cent in agriculture and engineering (*Economic Survey of Punjab*).

Table 37
Women and Scheduled Castes' Enrollment in Higher Education

Year	Postgraduate Students' Enrollment				
	Total enrollment	Women enrollment	Scheduled Castes enrollment	Women as percent of total	Scheduled Castes as percent of total
1971-80	6901	3495	513	50.6	7.4
1981-90	7313	4239	745	57.6	10.1
1991-00	13848	9564	1313	69.6	9.1
	Graduate Students' Enrolment				
1971-80	84353	33661	7302	39.9	8.9
1981-90	86510	44439	9801	51.4	11.3
1991-00	179817	91663	18555	51.0	10.3

Source: *Statistical Abstract of Punjab–2000;* Economic and Statistics Organization, Punjab.

It is evident that despite government's efforts, the enrollment of women and Scheduled Castes students is still far behind that of the general castes. Reasons for the educational backwardness of women and Scheduled Castes are mainly: (i) economic and social status of the families; (ii) lack of interest and inadequate backup by family or society; (iii) medium of instructions imparted in colleges and universities; and (iv) negative attitude of the students. Although the proportion of women and Scheduled Castes availing higher education has increased in relative numbers, there is still need to encourage them to go in for higher education.

REGIONAL (DISTRICT-WISE) IMBALANCES

Besides other educational variables, the dimension of regional disparities in facilities of higher education available is also noteworthy. Table 38 shows that these vary from district to district. There are a few districts, which have far better educational facilities than others, in relation to the actual requirements of the existing population. In Punjab, the 17-23 years age group population constitutes 14 per cent of the total. Table 38 presents figures of district-wise population of the age group 17-23 years, who have availed of higher education.

Table 38
Educational Facilities in Districts in Relation to Population

Districts	Population Total	Population 17-23*	Univer-sities*	Colleges	Enrollments					
					Postgraduates			Graduates		
					Total	Total %	17-23 %*	Total	Total %	17-23 %*
Gurdaspur	2096889	293565	-	18	335	0.01	0.11	15689	0.75	5.34
Amritsar	3074207	430289	1	28	2482	0.08	0.6	17283	0.51	4.01
Kapurthala	752287	105320	-	19	287	0.04	0.3	7364	0.97	7.10
Jalandhar	1953508	273491	1	26	2651	0.13	1.00	19557	1.00	7.20
Nawan Shehar	586637	82129	-	11	54	0.009	0.11	4205	0.74	5.21
Hoshiarpur	1478045	206926	-	18	1571	0.10	0.81	12551	0.84	6.15
Rupnagar	1110000	155400	-	11	166	0.01	0.11	6249	0.56	4.02
Ludhiana	3030352	424249	1	40	3308	0.10	0.87	30812	1.01	7.31
Ferozepur	1744753	244265	-	16	304	0.01	0.12	10316	0.60	4.22
Faridkot	552466	77345	1	9	89	0.01	0.11	3918	0.70	5.15
Mukatsar	776702	108738	-	11	70	0.009	0.64	4630	0.59	4.25
Moga	886313	124083	-	16	10	0.002	0.05	5816	0.65	4.68
Bathinda	1181236	165373	1	14	85	0.007	0.05	8272	0.70	5.00
Mansa	688630	96408	-	7	25	0.003	0.03	2227	0.32	2.30
Sangrur	1998464	279785	-	16	200	0.01	0.07	12428	0.62	4.44
Patiala	1839056	257468	1	21	2188	0.11	0.84	15510	0.84	6.62
Fatehgarh Sahib	539751	75565	-	6	23	0.004	0.03	2990	0.55	4.00
Punjab	**24289296**	**3400501**	**6**	**287**	**13848**	**0.05**	**0.40**	**179817**	**0.74**	**9.28**

Source: *Census Operation 2001*; Punjab Series-17 and *Statistical Abstracts-2001*, Government of Punjab, PP. 510-524.

Note: Punjab University, Chandigarh is not included in the table
Medical colleges: Patiala-1, Amritsar-1, Faridkot-1, Ludhiana –2
Engineering colleges: one each at Ludhiana, Patiala, Jalandhar, :Longowal, Gurdaspur, Faridkot, Malout, Mohali, Fatehgarh Sahib and Bathinda. Besides one medical college and one engineering college are also located at Chandigarh
* Estimated population calculated from year age group return, (1991 census), indicating 14% of total population – 2001 Census

The data in Table 38 show that out of the six universities located in Punjab, three are in the adjoining districts of Ludhiana, Jalandhar and Amritsar. These districts are far better-off in their socio-economic and educational conditions and are considered to be developed districts of the state. Punjabi University, located at Patiala, is the only university, which provides educational facilities to some underdeveloped districts of Punjab. Punjab Medical University and Punjab Veterinary Sciences University, located at Faridkot and Talwandi Saboo respectively, are basically meant for human health and veterinary sciences. These two universities cater to a very small area of Punjab. Mansa, Sangrur, Gurdaspur, Mukatsar and Ferozepur are classified as backward districts and have very limited facilities of higher education. This shows that the universities located in Punjab basically promote higher education in developed and particularly in urban areas. This perpetuates regional (district-wise) disparities in higher education in the state. Besides, it is also notable that most of the engineering and medical colleges in the state are situated in urban areas of developed districts. This means that the backward districts need to be considered for thoughtful planning by the state government for the development of higher education. The quantitative information supplied by the Education Department gives the impression that there is need to establish more colleges and universities for bringing about a balance between developed and underdeveloped, and urban and rural populations. Since Punjab is passing through a financial crisis, it is suggested that the state should not establish new higher educational institutions, but should use existing infrastructure for opening new sections for higher students' enrollment in a shift system.

GROWTH OF TEACHING STAFF

Along with the expansion of institutions and students, there has been a corresponding growth in the number of teachers in the universities and colleges, from 483 and 6,052 (1971-1980) to 839 and 10,057 (1991-2000) respectively as Table 39 highlights.

Table 39
Number of Teachers in Universities and Colleges, 1971-2000

Decades	Universities			Arts, Science, Commerce and Home science colleges			Engineering, Technology and Architecture colleges			Medical colleges (Allopathic only)			Teachers' Training colleges (B.ed)		
	Men	Wo-men	Total	Men	Wo-men	Total	Men	Wo-Men	Total	Men	Wo-Men	Total	Men	Wo-men	Total
1971-80	398	85	483	3105	1604	4709	241	4	245	598	228	826	154	118	272
1981-90	504	115	622	3401	2653	6052	252	16	268	849	257	1106	125	130	255
1991-00	613	226	839	3421	3804	7225	866	208	1074	872	492	1364	108	286	394

Source: *Statistical Abstract of Punjab 2001*; Economic Advisor to Government of Punjab, Chandigarh.

Table 40 shows the district-wise number of teachers in recognized colleges according to courses of study.

Table 40
District-wise Number of Teachers in Recognized Colleges according to Courses of Study (2000)

Districts	Arts, Science, Commerce and Home science Colleges			Engineering, Technology and Architecture Colleges			Medical Colleges (Allopathic only)			Teachers Training Colleges (B.Ed)		
	Men	Women	Total	Men	Wo-men	Total	Men	Wo-men	Total	Men	Wo-men	Total
Gurdaspur	273	258	531	48	7	55	-	-	-	1	7	8
Amritsar	388	413	801	-	-	-	196	114	310	11	39	50
Kapurthala	205	194	399	-	-	-	-	-	-	11	21	32
Jullandhar	455	643	1098	78	17	95	-	-	-	11	25	36
Nawan Shehar	107	89	196	13	4	17	-	-	-	4	7	11
Hoshiarpur	325	249	574	-	-	-	-	-	-	14	6	20
Rupnagar	109	171	280	60	39	99	-	-	-	-	-	-
Ludhiana	473	778	1251	204	17	221	396	280	676	17	88	105
Ferozepur	189	165	354	48	14	62	-	-	-	15	38	53
Faridkot	58	34	92	28	9	37	109	33	142	5	6	11
Mukatsar	71	75	146	35	10	45	-	-	-	7	5	12
Moga	47	101	148	27	15	42	-	-	-	7	30	37
Bathinda	132	120	252	63	14	77	-	-	-	-	-	-
Mansa	51	30	81	-	-	-	-	-	-	-	-	-
Sangrur	240	147	387	133	20	153	-	-	-	-	-	-
Patiala	250	301	551	103	32	135	171	65	236	5	14	19
Fatehgarh Sahib	48	36	84	26	10	36	-	-	-	-	-	-

Source: *Statistical Abstract of Punjab-2001*; Government of Punjab.

The trend in recruitment of teachers reveals that the number of teachers in the universities and colleges has increased three-fold within the last three decades. Information available from the Higher Education Department, Government of Punjab, explains that the current situation has become variable (decrease or stagnation), because of limited funds and non-availability of grants on time. The number of students per teacher (teacher-pupil ratio) appears acceptable on the aggregate as Table 41 highlights:

Table 41
Student-teacher Ratio

	University Teachers			College Teachers		
Decades	Students	Teachers	Ratio	Students	Teachers	Ratio
1971-80	6901	483	14:3	84353	6052	13:9
1981-90	7313	622	11:8	86501	9239	9:4
1991-00	13848	839	16:9	179817	10057	17:9

Source: *Statistical Abstract of Punjab–2001;* Economic and Statistics Organization, Punjab.

At most levels, the existing pupils-teacher ratio in the state conforms to the norms laid down by the Education Commission (1964-66). The existing number of teachers at university and college levels appears to be sufficient, with a reasonable a good ratio of 17 and 18 students per teacher. This suggests that, for the next two decades, no new appointment of teachers may take place at university and college levels, except for replacement of retirement, or any other unforeseen happenings, even though the number of students will keep on rising, both as a result of the natural growth in students and a decline in the dropout rate.

EFFICIENCY, STANDARDS AND QUALITY OF HIGHER EDUCATION SYSTEM

Higher education contributes to the development of every area by providing educated and trained manpower for its economic and industrial set-up. Thus, higher education and economy are closely related and have a direct impact on each other. The efficiency of the system is, therefore, judged by the quantity and quality of the product at the given cost. Efficiency can be considered, as to (1) whether the out-turn of graduates and postgraduates of university education is upto the mark both in terms of quantity (number passed) and quality (level of academic achievement), or (2) whether the graduates and postgraduates are equipped with skills and capabilities required by the existing economy, or whether there is a mismatch between the training imparted and the skills needed. This can be assessed by examining extent to which graduates and post-graduates are absorbed in the job market (*Higher Education in India*, pp.89-90). The present position of higher education in regard to efficiency and quality reveal the level of wastage and the number of failures at the first-degree stage or passes in third division. This adds to the number of educated unemployed. This is a major issue, which must be tackled. The quantitative expansion of higher education in the state has been unplanned and unbalanced. The expansion has taken place not by choice but by compulsion. Some times it has been in order to satisfy social and political demands. While the system has expanded in terms of institutions and enrollments, there has been no change in the basic infrastructure facilities for meeting the educational needs of the growing number of students. One of the obvious implications of this numerical growth, without qualitative improvement, is that students do not get the education desirable, related to the demand. The colleges do not have adequate space, classrooms, and playgrounds, libraries and laboratories. Inadequate infrastructure facilities contribute to low academic standards in the affiliated colleges, where more than 80 per cent of the enrollment is concentrated. The problem is particularly acute in urban areas where, due to political and social pressures, colleges have to enroll students beyond the allotted number of seats, strength, or unqualified or, below average students. Overcrowding in the affiliated colleges has almost made it impossible to produce quality pass-outs or to introduce any change or innovation. Even the condition of the professional colleges is not very healthy, where admissions are also made after charging heavy fees in the form of endowment funds. In these cases the merit and capabilities of the candidates are generally ignored. In such circumstances, retention of the quality and standards of education is impossible. This state of affairs demands serious attention.

Support for Research

Research, the highest academic endeavor, is either compulsory, or an optional subject, directed by different departments of different universities, especially in post-graduate courses. Obviously, research at this level cannot be expected to have a high standard of quality and the findings might not be accepted as valid to be considered for any policy or plan. M.Phil research is in partial fulfillment of degree requirements and in many cases, it can be extended to Ph.D Most research work at a higher educational level does not seem to be thematic; it is fragmentary and lacks precision of thought and technique, as reported by the Education Reforms Commission Punjab, 1985. The report did not under-estimate the scope of fundamental research in education, but suggested that, to solve current educational problems, applied research, including action research, is equally important. Research must not be restricted merely to universities departments, but has to flow to other institutions too, and should be linked with the policy and planning strategies of the state.

TEACHERS' TRAINING AND TEACHING

The State Council of Education Research and Training, Punjab, has laid the main stress on pre-service and in-service teachers' training**.** For giving in-service training to the already working secondary teachers, 12 In-service Training Centres have been functioning at District headquarters in the state. In addition, the State Institute of Science Education imparts in-service training to science and mathematics teachers. To impart training in the latest advances in educational technology, SCERT organizes seminars for teachers through the educational technology cell. The main objectives of these institutions are to: (1) bring about qualitative improvement in the existing educational system of the state; (2) provide pre- and In-service education for teachers and educational supervisors; (3) monitor and develop educational programmes; (4) introduce and implement new education policies of the Central and State Governments. Education Reforms Commission, Punjab, 1985, had also given importance to pre-service or entering-service training programmes. It maintains that existing training programmes have no relevance to the present-day teaching and learning situation. A sense of professionalism is often lacking among teachers and no attempts are being made to arouse it. Institutions imparting teacher-education have superficial links with the existing system of education, whether in schools or in universities, therefore, the dominant thrust areas of teacher-education should be value-oriented education to strike a balance between the concomitants of advances in science and technology and humanistic values. As for vocationalization of education, teachers should be sensitized to acquire skills to link educational activity with work and employment, so as to create an urge for continuing professional education. In the current technological environment, there should be a special training programme package in the pre- and in-service training programmes. Teachers' training institutes should have their own practicising schools. Information technology needs to be introduced in the course of the training programmes. To raise the quality and standards of education among pupils, it is absolutely essential to produce better-quality teachers and this can be done by providing better quality of training programmes. The state has no training programmes for teachers. It is necessary to initiate pre-service and in-service (condensed courses) training programmes for teachers, teaching in colleges and universities. The quality of teachers needs to be evaluated in terms of academic achievement, professional training, and the desirable attitude towards teaching as a profession. The present observations on Punjab's teachers highlight the lack of a system of ensuring accountability of the teachers in terms of the quality of their teaching work. There is no system of evaluation of the teacher's output with regard to teaching, research, innovation, and regularity at higher levels; hence, there is urgent need for the department of education to consider these issues seriously.

COURSES AND EXAMINATIONS

Examination is an integral part of the total educational process, as it has linkages both with teaching and learning. The examination component of the educational system has two broad objectives, namely, (a) to serve as a feed-back mechanism with regard to the effectiveness of the teaching-learning process, and (b) to classify the students at the end of a pre-determined period for purposes of class-promotion. In the present circumstances, examinations are being held mostly for the classification or promotion of students. The assessment is the basis of evaluating the performance of the students in a public examination, generally held annually. This system of examinations is almost identical in Punjab. The annual examination is the base for promoting students from one

class to another. In 1981, the UGC brought out a monograph on education reforms, which iterated the deficiencies, as a number of committees and commissions had earlier pointed out. On the basis of the recommendations of the committees and commissions, efforts have been made to remove the glaring shortcomings of the examination system. Basically, the whole system in the state has become examination-ridden. Mass copying (somewhere and sometime) is also prevalent at graduate and post-graduate levels. Some universities have introduced a semester system to reduce the burden of examinations on the students, but this effort has not produced significant results. Internal assessment, introduced in order to make evaluation of education an integral part of the teaching-learning process, has not produced much positive result. There is very low correlation between marks obtained by students in internal assessment and in external examination. Even the report of the Education Reforms Commission, Punjab, 1985, has maintained that the existing method of holding examinations in the state is not satisfactory. The use of unfair practices is on the rise. Teachers are not voluntarily coming forward to share responsibility because of various reasons. Hence the credibility of the existing examination system is fast disappearing. The report has suggested measures and approaches for overcoming the shortcomings of the examination system. Some of them are as under:

- The examination work should be made a part of the total responsibility of teacher.
- The heads of institutions should provide a list of teachers for performing these duties and each and every teacher should get his/her turn by rotation.
- A mechanism to co-ordinate and supervise the work of evaluation must be developed. To make the examination system clean, a code of ethics for the evaluation of the pupils must be evolved by the teachers themselves.

In the context of the situation in Punjab, there is no need for internal assessment; hence annual and terminal examinations alone (semester system) need to be conducted for students' evaluation. As annual examination promotes the students to the next class and terminal examinations evaluate the memory, time sense, and reproducing ability of the students, these systems might remove anxiety, nervousness and fear of examinations among students.

INSTITUTIONAL AND DISTANCE EDUCATION (OPEN LEARNING SYSTEM)

With the advancement of science and technology, the concept of imparting higher education has undergone a tremendous change. The conventional concept has given way to that of distance education. The new approaches to teaching and learning combine together correspondence with different communication media, such as television, audio-video recorder, computer and even satellite, etc. The system aims at extending facilities of education to all individuals regardless of 'who and where'. During the last decade, distance education has spread (correspondence courses and Indira Gandhi Open University system) throughout Punjab. The Open University system is an outgrowth of the development and wider acceptance of the concept of distance education. This includes use of non-print media as supplementary material, such as television, computer and satellite. Although Punjab has no open university, the Indira Gandhi Open University provides opportunities for higher education even here. Moreover, Punjab Technical University, Jalandhar, provides a franchise system of education for those, who are not enrolled in conventional institutions. The other universities, such as Punjabi University, Patiala, Guru Nanak Dev University, Amritsar,

and also Punjab University, Chandigarh, provide facilities through correspondence courses with print material and contact courses, mainly in Arts and literature subjects. In fact, the Directorate of Correspondence Courses and the Open University system have made significant progress in imparting higher education. Despite all efforts, this system of education mostly reaches the economically well-off upper class families, because of high fees. If the system of distance education has to develop into a viable and effective alternative to make education reach the most deprived and most needy population, then it has to provide education at nominal charges and introduce such subjects as are available in the conventional system of education.

FINANCIAL INPUTS, MONITORING AND CO-ORDINATION

In regard to the financial position, there is some difference in allocation of funds to government and non-government colleges. Statistics in previous tables revealed that the quantitative growth in higher education is noteworthy, but the flow of financial resources into the system of education is slow, insufficient and unevenly distributed. Financial resources are divided into two parts: (i) General Education and (ii) Technical and Professional Education.

Table 42
Resources Allocation in Education in Punjab during Plan Periods (in lakh)

Plan Periods	Plans after reorganized Punjab	General Education	Technical Education
1969-74	4th Plan	2100-00	85-00
1975-79	5th Plan	4237-00	125-25
1980-85	6th Plan	5300-00	300-00
1985-90	7th Plan	7637-00	2504-00
1992-97	8th Plan	21678-00	19600-00
1998-2003	9th Plan	41310-49	26202-50

Source: Prepared from different Plans and also recorded from department of higher and technical education.

Figures in Table 42 indicate a regular increase in the allocation of funds from the Fourth Plan to the Ninth Plan. The successive five-year plans indicate that the allocation of funds has increased in technical and professional education but general education has relatively suffered. The financial resources, though considerably increased in absolute terms, have been found grossly inadequate for imparting higher education to the major portion of the population. Inadequacy of funds has also affected adversely the qualitative development of education. As the number of institutions of higher education in the state has increased considerably and enrollment of students too, expenditure on higher education needs to be increased accordingly, as Table 43 shows.

Table 43
Plan and Non-Plan Budget for Higher Education in Punjab (in lakh)

Year	Plan			Non-Plan			Total		
	A.E.	R.E.	Exp.	A.E.	R.E.	Exp.	A.E.	R.E.	Exp.
1997-98	371.7	162.24	115.91	13128.7	15055.5	13684.75	13500.4	15217.7	13800.66
1998-99	428.7	333.51	205.49	15664.32	17751.84	16533.07	16093.02	18085.4	16738.56
1999-2000	473.2	393.7	59.2	14932.98	21866.08	21396.5	15406.18	22259.8	21455.7
2000-01	490.7	251	117.46	19516.72	21323.62	21851.24	20007.42	21574.6	21968.7
2001-02	246.2	237.51	67.17	19934.91	22392.54	-	20181.11	22630.1	-
2002-03	535.2	-	-	19872.77	-	-	20407.97	-	-

Source: Department of Higher Education Punjab, Chandigarh, April, 2002 (Unpublished)
Note: A.E: Approved Estimates, RE: Revised Estimates, Exp.: Expenditure

The general trend of resource allocation shows that a major part of the expenditure is on salaries of teachers. The proportion of expenditure on staff salaries has been continuously rising over successive decades in Punjab. This leaves little for expenditure on enhancing the quality of education. This has an adverse effect on developmental objectives.

Besides funds allocated by the state government, there are several other bodies, apart from individuals and business undertakings, which contribute directly or indirectly to the expenditure incurred by educational institutions. These include the Central Government, University Grants Commission, universities, etc. The trend of expenditure by such institutions, however, cannot be projected for future years. The proportionate distribution of expenditure on teachers and other staff salaries, recurring and non-recurring expenses is shown in Table 44.

Table 44

Distribution of Expenditure on Salaries and other Management (Percent)

Years	College/University						
	Recurring Salaries					Non-Recurring	
	Teaching	Non-Teaching	Total Salaries	Other	Total	Non recurring	Grand Total
1980-81	60.62	13.99	74.6	-			
1991-92	57.3	15.1	72.4	22.6	95.0	5.0	100.00
2001-02	55.0	16.0	71.0	23.0	94.0	6.0	100.00
	Professional Institutions						
1980-81	44.70	20.73	65.43	-	-	-	100.00
1991-92	42.0	24.0	66.0	26.0	92.0	8.0	100.00
2001-02	40.0	26.0	66.0	26.0	92.0	8.0	100.00

Source: Education Reforms Commission Punjab, 1985, section III, P. 148.

The report of the Education Reforms Commission, Punjab, 1985, clarified that in absolute terms both teachers' salaries and total per student expenditure would rise steadily over the years. However, no separate estimates have been made for college and university education, even though the cost of education is known to be markedly different for arts and science students and those undergoing professional courses, such as medicine, engineering, business administration, agriculture and computer science. The report pointed out that the proportion of students going in for advanced courses have risen from 5.3 per cent of the population in the 18-23 years age group in 1981-82, to 6.7 per cent in 1991-92, and 8.2 per cent by 2001-02. In the absence of per-student cost data for all these disciplines, averages were arrived at to represent the cost for students above the plus 2 level, in two categories: those studying general courses in colleges and universities and those in professional institutions studying medicine, engineering and the like. This exercise, broadly indicates the large amount of money that would be required to impart education to students at higher levels in the next two decade, without specifying the breakup of students under various disciplines.

Besides the above, expenditure per pupil at the higher level of education has apparently increased. Although per-student cost is not available, there are estimates that indicate that expenditure per pupil at higher professional levels is two to three times higher than at higher general-education level. A good explanation for such a difference in favour of

professional education as against general education in allocation of funds has been given by Varghese (*Resources for Higher Education in India*,*1987*). There is a positive correlation between the socio-economic background of the students and the level of educational achievement. Professional and technical courses normally attract students from urban affluent families. This is perhaps true not only for Punjab, but for other states also. Dhar (*Education and Employment in India,1976*) pointed out that sons and daughters of well-off parents study in such fields as medicine and engineering, which command higher salaries, and are characterized by very low unemployment rates. Youths from lower social economic groups attend arts, science and commerce colleges. The policy of admissions also tends to help in maintaining such a discriminatory system. Generally, admissions to professional courses are made on the basis of competitive tests, which tend to help students from well-to-do families, mostly from urban areas. Sharma (*Professionals in the Making; Their Social Origins,1976*) reached the conclusion that the urban background and public school education with high proficiency in English, rather than proficiency in the subject, help in securing good marks in competitive tests. This means obviously that competitive examinations are in favour of a few rich families, ignoring the interests of the poor masses. This relates to the cost of education, which has increased significantly in terms of current prices. This situation also exists in Punjab, relatively, and needs to be given serious consideration.

ISSUES FOR FUTURE CONSIDERATIONS (HIGHER EDUCATION)

Besides the above discussion, it is imperative to discuss issues, which too need serious attention.

1. It is evident that the higher education system in Punjab has expanded significantly since the reorganization of the state. The number of universities has increased from three to seven in the last three decades (1971-2000), a more than 100 per cent rise. Colleges (general and professional), which were 188 in 1971-80 increased to 287 in 2000 and are located in both rural and urban areas. The system has enrolled nearly two lakh students in various undergraduate and post-graduate courses. Women and Scheduled Castes students constitute about 60.3 per cent and 9.7 per cent of the total enrollment in institutions of higher education. Nevertheless higher education still demands specialized human resource development with improved infrastructural facilities.
2. Despite the extremely high growth rate of higher education, Punjab still lags behind, in terms of International standards' in providing opportunities of higher education to the relevant age group (17-23). The *UNESCO Statistical Yearbook 1995* indicated that a very small portion (6%) of the relevant age group of population of India was enrolled in institutions of higher education. However, Punjab has a slightly better record in this regard. A large number of students do not go beyond graduation. About 90 per cent of the total enrollment into higher education is for undergraduate courses. About nine per cent of the students are enrolled for postgraduate courses and less than one percent (0.2%) for Ph.D and M.Phil research work. The maximum numbers are in liberal arts/science courses (89.25%). Engineering and technical and professional courses attract a very small percentage (10.75%) of students. In the circumstances, there is urgent need to encourage students to shift from liberal arts/sciences to paramedical and applied sciences. This will bridge the gap between technical and professional and arts/sciences courses.

3. Autonomy and accountability are considered to be important aspects of qualitative management. Almost all the commissions on education have recommended (a) delegation of powers and duties'; (b) autonomy to departments and colleges, and (c) accountability of different participants of the system. The report, *Alternative Models of Management,* by Gnanam, recommended (a) decentralization of responsibilities and authority; (b) participatory management; (c) accountability of all participants; and (d) assessment of performance. Current evidence continues to support the observations of the Govariker Committee Report (1988), on the management of universities in India. As it pointed out, the management of universities in India is of a rigid and controlling nature, leaving no scope for any invention/innovation in the teaching- learning process. The entire university system has been reduced to conduct of examinations, declaration of results and planning for new admissions. Recommendations on delegation of power, autonomy, and accountability are yet to be implemented at the university as well as college levels. The existing system of higher education in Punjab demands that autonomy must be given to universities and to certain colleges in respect to teaching methodology, curriculum development and examination improvement, under a system of monitoring and evaluation. The accountability of the institutions is essential as it checks fall in standards and malpractices.
4. Despite all encouragement from the University Grants Commission and the State Education Department, no autonomous college exists in Punjab. The scheme of autonomous colleges, suggested by the Commission and the National Policy on Education (1986) and Programme of Action of (1986), needs to be activated.
5. Maintenance of quality and standards in the institutions of higher education is the responsibility of the University Grants Commission and the State Education Departments. The University Grants Commission has suggested some norms for maintenance of minimum standards of the teaching- learning process in universities and colleges. These are: there should be 200 working days, 40 working/teaching hours per week by per teacher, and 75 per cent minimum attendance of students at tutorials along with lectures. But, in practice, universities and colleges work for not more than 100 days in a year. If an institution of higher education works for only 100 days, instead of 200 days, then the quality of the teaching-learning process is bound to suffer. Keeping this in view, it is suggested that there is need to revamp the whole system of examinations, vacations and admission pattern. Motivation will be needed for the involvement and dedication of teachers.
6. The quality of output is usually assessed in terms of (a) performance in examination and (b) placement level. This assessment might be valid, but it has no relevance to the demands of the employment market. For this, job-oriented courses might help ensure better placements. There is also need to prepare database by each institute of higher education in the state, and also in the country.
7. As far as the performance of students is concerned the rate of wastage at the undergraduate level is almost 40 per cent to 50 per cent (AIU, 1985) and 40 per cent to 60 per cent (AIU, 1996) at the post-graduate level. These percentages have been obtained from specific case studies. The performance of college and university students in Punjab is also more or less the same. This wastage could possibly be reduced by providing new opportunities for a career in research and management with better incentives.

8. The University Grants Commission has initiated various schemes for curriculum development and restructuring courses, to reorient these to the needs of the society. A study by AIU (1985) indicated that the system of higher education had become obsolete. It neither helped those who wanted to go for self-employment nor those who wanted to go for jobs of any kind. The present system in Punjab apparently is in a similar position and has not undergone any significant change. Although, one or two universities and some colleges have gone for restructuring of courses and adopting an interdisciplinary approach in the teaching-learning process, this is not sufficient, hence a fundamentally fresh approach is needed.
9. Although the participation of women in higher education has increased in relative numbers, they continue to participate only in such traditional courses as arts, humanities and education. Maximum participation of women candidates (45.6% to 60.3%) in total enrollment has been seen during the last three decades, but their participation in technical and professional courses is comparatively extremely low. The participation of SC candidates in institutions of higher education has increased relatively. They constituted 9.7 per cent of the total enrollment in higher education, which has increased marginally (8.1% to 9.7%), within the last three decades. For greater participation of women and Schedule Castes students in job-oriented science subjects, there is need to change the attitude of families concerned and society, as a whole.
10. Distance (open university) education is imparted through correspondence courses with the following objectives: (a) providing efficient qualitative education through less expensive methods, (b) meeting the increasing demand for higher education, and (c) providing education to all those who cannot reach the conventional university teaching for various reasons. This method of teaching/learning is quite acceptable but, in practice, it only reaches economically well-off families. The University Grants Commission too encourages correspondence courses and open university system in the states. Presently, the system suffers from some deficiencies: (a) low quality of education; (b) covering only arts and social sciences in higher education; (c) repetition of courses already available in the conventional universities, and (d) lack of use of new technologies of education, etc. These universities should take serious steps to remove these deficiencies. Revamping the curriculum is necessary to make it more practical and job-oriented and better facilities are required for the contact programme and libraries. There is scope of opening up access to new disciplines of practical need of the students.
11. The share of higher education in the public current expenditure in India is 14.7 per cent, which is much lower than that of some of the developed countries (*UNESO Statistical Year Book, 1995*). Hardly one per cent of the GNP is spent on research and development in science and technology. Expenditure on research and development and higher education ultimately determines the level of future development of the country. Punjab, being a developed state, financing higher education is an important issue and the question is who should be responsible -- the State, or the Centre, or the beneficiaries, or everyone? The World Bank's view is that higher education in India is subsidized for children of well-to-do families. A similar situation exists in Punjab. The beneficiaries have the capacity to pay, therefore, they should pay. A similar view has been taken in a White Paper prepared by the Ministry of Finance, Government of India. It treats higher education as a non-merit good and maintains that as the substantial benefit of education goes to individuals, it should be treated as private good, for which students should pay. Financial assistance is essential for research-

oriented courses. Earn while learn schemes may help generate more participation in the existing system of education.

12. The methods of teaching are weighted in the direction of memorizing of texts for merely getting degrees, which are meant for getting employment or better marriage prospects. Now the time has come, when degrees awarded should be linked with employment, or self-employment opportunities. The system needs revamping, hence a broad-based overall approach is needed for the evaluation of students.
13. Planning for general and professional education (especially technical education) should be aimed at achieving self-reliant growth and upgradation of domestic technological capabilities. To strengthen Punjab's scientific and technological capabilities, it is necessary to initiate research and development in different related areas. Although technical and vocational Institutions from ITIs and polytechnics to post-graduate level courses cover science and technology disciplines, there is need for an IIT as an apex body in Punjab, which should have linkages with technical courses in different higher education institutions located in the state.
14. There is serious unemployment among engineers and technicians in the state, because of mismatch between qualifications of students coming out of these institutions and the demand of the industry. There is also the factor of sick units, or the failure of the industrial units at various focal points in the state. Hence there is urgent need to establish and develop industrial units in the state. With the anticipated industrial growth and economic development in the next two decades, there will be scope for the absorption of many qualified engineers and technicians. At present, many highly qualified engineers and technologists migrate abroad or to metropolitan cities in search of better employment opportunities. Establishment and development of industrial units in the state might check out-migration of qualified and skilled manpower, and also in-migration of unskilled, unqualified people. Modification in industrial policy is needed to check brain drain.
15. Technical education institutions by and large function independently. Linkages between technical institutions and users' agencies are not sufficiently strong. Taking into account the current situation and the likely needs of successive years, more concerted efforts need to be made to enable technical education play its desired role in meeting the needs of industry. Taking into account the state's development and socio-economic perspectives, there is need to reorganize the technical education system, through induction of improved technologies' aimed at providing adequate technical and managerial manpower to the service sector as well as the unorganized sector.
16. There is need for development in other areas, such as micro-electronics, informatics, telemetric, bio-technologies, engineering design, material sciences, instrumentation and space technology. A well concerted and co-ordinated approach to the introduction of emerging technologies in innovative industries might further accelerate the development and socio-economic growth of the state.
17. Political will is needed if technical education is to address itself to these multiple and challenging tasks. As scientific and technological advances are very rapid and unpredictable, a viable approach to technical education must encourage development of motivation and skills for continuing and independent learning. Hence, there is need to reshape, restructure and reorganize the technical education system for producing high quality engineers and technologists, so that

they may contribute to the development of the state and meet the challenges of the future.

18. Due to social and political pressures, the higher education system in Punjab has expended faster in the last two decades in terms of institutions, enrollment and manpower. Higher education is today apparently open to all, irrespective of merit or capabilities. Its rapid expansion is due to a higher pressure on enrollment in colleges and universities without proportionate expansion of essential infrastructure facilities. This has adversely affected quality and standards. A large majority of such colleges are located in urban areas, providing educational facilities to urban students; therefore, the rural pupils have limited scope for higher education. This deprives them of opportunities to compete with urban pupils, both in further educational avenues and in the job market. A rational approach is needed for opening new colleges and also attention to proper infrastructure, numbers of candidates and the viability of the courses.

19. Private affiliated colleges receive government aid to the extent of 95 per cent of their recurring expenditure based on their staff strength (according to the Directorate of Education). This aid has now become inadequate in view of the increase in the administrative and teaching staff of these colleges. The grants, more often than otherwise, are not available in time, which cause considerable hardship to the institutions and their staff. This system needs to be reviewed. The Education Reforms Commission, Punjab, 1985, pointed out that the state has a well-founded system of university education. The prime objective of the university is to engage itself in the pursuit of creating new knowledge. The need of the economy and all development processes is for persons skilled in the art of utilizing the already discovered knowledge for the benefit of society. An analysis of the manpower needs of any organized socio-economic system would reveal that, for its successful functioning, it requires 80 per cent of its personnel trained in skills for utilizing the existing knowledge and only 20 per cent of those for generating new knowledge. While our universities are geared to train only the latter category, our tertiary system has no provision for training the former, which constitutes the bulk of the manpower needs of the economy. Until the gap is filled, or facilities for doing so are fully developed, education at this level will remain unbalanced. This mismatch between needs of, and achievements in manpower development is responsible for educated unemployment and pressure on universities, leading to a fall in standards of education.

20. Government should encourage private enterprises and avoid creating a system based on affiliation of institutions with central agencies. It is also suggested that the government may follow the Bits-Pilani pattern (practical school, where practical training has been given more importance) for technical education in Punjab.

SUMMING UP (HIGHER EDUCATION)

Most of the relevant issues concerning higher education were first discussed by the Universities Education Commission (1948-49) and then by the Education Commission (1964-66). Both expressed grave concern about the deteriorating quality of higher education. The National Policy on Education (1968) too proposed various measures for the improvement of higher education. It has suggested the need for effective measures for all-round improvement and emphasized consolidation and expansion of facilities in existing institutions. It has also expressed concern about deteriorating academic

standards in affiliated colleges. This system does not provide autonomy to deserving colleges to frame curricula, courses of studies, or develop their own system of evaluation. It has clearly stated that courses and programmes should be redesigned to meet the demands of specialization. The scheme of re-designing courses has been introduced by UGC to re-model the conventional three subjects' course of the first-degree level. The National Policy (1986) suggested that teachers' performance should be systematically assessed and also proposed provision of enhanced support to research and steps to ensure its high quality. It also envisaged the establishment of a National Apex Body covering general and professional education for greater co-ordination and consistency of policy, sharing facilities and developing inter-disciplinary research. The UGC has given high priority to the implementation of NPE (1986). Presently, in Punjab, the responsibility for the development of professional and technical higher education is shared by the Department of Education and a number of other agencies. There are separate structures for higher education in engineering, medicine and agriculture. Separation of decision making and funding mechanism has become more of a problem, because various disciplines are emerging, and courses of study have to be developed, keeping in view the need for developing compatible inter-faces with other related disciplines. In order to remedy this problem, there is need to establish a state apex body for higher education, undertake integrated planning and reinforce programmes of post-graduate education and interdisciplinary research. NPE (1986) also has specific proposals for improving overall improvement of the efficiency of the universities. Effective measures will have to be taken for improving the working conditions of teachers and the quality of teaching. A comprehensive, open, participatory and data-based system of teacher-evaluation needs to be established. It should take into account the work of teachers in research and innovation, regularity and attention to teaching and extension, and social service activities.

Many good schemes suggested by the different Commissions (1948-49 and 1964-66), and Policies (1968 and 1986) have not provided expected results because of inadequate strategies for implementation, lack of financial resources, or lack of political will. Some of the programmes were not implemented and some failed because of scarcity of funds. A firm determination and a strong political will are the essential instruments, which can pave the path to success. If the Government of Punjab has desirable intentions and is willing to bring about qualitative improvement in higher education, then the suggested measures might be helpful in shaping and reshaping the existing educational system of higher education.

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