



**FRAME WORK
FOR
IMPLEMENTATION
OF
EDUCATIONAL REFORMS
IN
PUNJAB**

**SECTION III ORGANISATION AND MANAGEMENT OF EDUCATION
SUPPORTING SUB SYSTEMS AND FINANCIAL IMPLICATIONS**

EDUCATION REFORMS COMMISSION, PUNJAB 1985

SECTION III

Organization and Management of Education, Supporting sub Systems and Financial Implication

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D03911

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17-E, Sri Aurobindo Marg, New Delhi-110016
DOC. No. 39/11
Date 13/8/82

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CHAPTER X

ORGANISATION AND MANAGEMENT OF THE EDUCATION SYSTEM IN PUNJAB

10.01 A brief historical perspective would be useful in understanding the present educational system and its management in the Punjab. What fell to the lot of this State after independence or, for that matter, to any other State, was a highly centralised and bureaucratic system of Educational Administration as a legacy of the colonial past. This was characterised by excessive concentration of authority at the Directorate and the Divisional levels. The District level and below, where education was actually imparted, were ignored and formed the weakest link of the system.

10.02 The Director of Public Instruction was Head of the Department and ex-officio Education Secretary to the State Government. The Director of Public Instruction's status as Education Secretary continued till 31st December, 1957, whereafter a separate post of Education Secretary became a part of the Secretariat. The jurisdiction of the Directorate included both schools and colleges. The Director of Public Instruction was assisted by a Deputy Director Men's Cadre and another from Women's Cadre. The Directorate's complement also included one Inspector (Vernacular Education), one Registrar (Departmental Examinations), one Inspector of Training Institutions, one Officer on Special Duty, N.C.C. and one Officer for Social Education. The D.P.I. was an educationist and so were his deputies.

10.03 The Chief at the Divisional level was an Inspector (Class I), assisted by a team of deputies (Class II) who would assist the head in controlling, inspecting and supervising the High Schools in the Division concerned. The Inspector at the Divisional level was a link between the District and the Directorate at the top.

10.04 The District Inspector/Inspectress of Schools in the District looked after the schools up to the middle level. The District Chief was assisted by a team of Assistant District Inspectors, whose main job was to take care of the primary schools, including administration, supervision, inspection, examination and statistics, of schools under their charge. This structure worked reasonably well because of the manageable number of schools until provincialisation of Local Bodies Schools in the year 1957.

10.05 The merger of Patiala and East Punjab States union in the year 1956 and provincialisation of Local Bodies Schools in the year 1957, added new dimensions to the problems of organisation, administration and supervision of education in the state. A sudden addition of 30,000 personnel of

various categories of the teaching staff far outnumbered the total strength of the existing teaching personnel of the state. As most of the schools previously managed by the local bodies were not up to the mark, they diluted the qualitative standard of education. The pupil-teacher ratio worsened further. The supervisory staff found it very difficult to cope with this huge expansion, for which no provision existed or was made.

Reorganisation
1961-62.

10.06. As already mentioned above, the provincialisation of local bodies schools added a huge dimension to the workload. It was genuinely felt that an efficient management of administration was not possible with the earlier policy of concentration of all authority at the top or even at the divisional level. Shri J. D. Sharma, I.A.S., Deputy Secretary to Government, Punjab, Education Department, submitted a report on the Reorganisation of the Punjab Education Department on the 11th January, 1962.

10.07 The main thrust of the recommendations of his report was on strengthening the district and the lower levels. In the proposed reorganisation the District Education Officer was to be the 'King-pin'. As such he was expected to be a person of high academic qualifications and a seasoned educationist. Besides, he was also expected to have a flair for administration and a sound knowledge of the working of the department. The post was proposed to be in P.E.S. Class I. Both men and women were eligible for it. All types of schools right from pre-primary to the higher secondary level were placed under the jurisdiction of the District Chief.

10.08 The earlier role of the Divisional Inspector of Schools in respect of administration, supervision and implementation of government policies was, under this reorganisation, to pass on to the district level. The Divisional Officer under the new set-up was redesignated as Circle Education Officer in P.E.S. Class I. His role was primarily supervisory appellate and coordinative. He was expected to carry out snap inspections of District Offices and below. He was also to keep the D.P.I. informed on the basis of these inspections.

10.09 Both the offices of the Divisional Inspector and Inspectress of Schools were amalgamated to form one unified divisional office at the circle level. Men Circle Education Officers were to be assisted by women Deputy Circle Education Officers and *vice versa*. The status of the Circle Chief was equated to that of Deputy Director at the Headquarters. Parity in special pay attached to the post was maintained.

Reorganisation
of erstwhile
Punjab State,
1966.

10.10 As a result of Reorganisation of the Erstwhile Punjab in the year 1966, six out of a total of 18 districts went to Haryana, two to Himachal Pradesh and ten to the new State of Punjab. Take-over of institutions, teachers and students by the Punjab is detailed on next page.

TABLE 10-1 NUMBER OF INSTITUTIONS, TEACHERS AND STUDENTS IN 196-67

Serial No.	Category of Institutions	Number of Institutions	Number of teachers	Number of students
1.	Universities	2	230	1909
2.	Colleges for General Education	65	2312	50495
3.	Colleges for Professional Education Excluding Teacher Training	37	1506	12520
4.	TEACHER TRAINING			
	a. Post-Graduate	16	222	3294
	b. Under-Graduate	13	151	3330
5.	High/Higher Secondary Schools	1023	22428	685942
6.	Middle Schools	866	8936	288088
1.	Primary Schools	7002	12723	884849
8.	Pre-Primary	3	7	181
9.	Schools for Professional Education Excluding Teacher Training Schools	434	1507	21895
	Total :	9461	60022	1952503

Source : Education in Punjab, Statistical Tables, Vol. II, 1966-67, D.P.I. Punjab.

10.11 The Directorate of Public Instruction (Schools) came into being in the year 1976, ten years after the reorganisation of the State, by bifurcating the composite Directorate into two independent Directorates : Bifurcation of the Unified Directorates 1976.

(1) The Directorate of Schools, and

(2) The Directorate of Colleges.

It was the huge expansion in school education that necessitated this bifurcation. During the preceding decade the number of primary schools, as on 30th September, 1976, had risen to 9,763, which included 9,569 Government and 194 non-government (recognised) schools. During the year 1976-77 all the revenue villages of Punjab without schools were provided with primary schools.

10.12 The number of middle schools during the same period rose to 1616 as on 30th September, 1976. The number of high schools on the same date was 1419 and that of higher secondary schools 245.

10.13 The number of all categories of school, teachers from primary to the higher secondary level rose to 87727 while enrolment of age level 6—14 during the same period came up to 28.91 lakhs.

Separate
Directorate
for Primary
Education-
1978.

10.14 The Government set up a separate Directorate of Primary Education in February, 1978, two years after the bifurcation of the joint Directorate of Education in 1976. This was done primarily with a view to strengthening the Primary infra-structure of education by providing specialist and exclusive education to this crucial level. Inspection and supervision of primary schools was reinforced for bringing about improvement in the class room instruction, co-curricular activities and the general tone of Primary schools.

10.15 The following table presents a statistical picture of primary schools, from the year 1976-77 to 1982-83 :

TABLE 10.2 ENROLMENT AND NUMBER OF SCHOOLS AT THE PRIMARY STAGE

<i>Year</i>	<i>Number of Schools</i>	<i>Number of students</i>
1976-77	9763	2059161
1977-78	12401	2126732
1978-79	12361	2050616
1979-80	12371	2061331
1980-81	12381	2070604
1981-82	12381	2008404
1982-83	12389	1923943

Source : Statistical Section, DPI(S) Punjab, Chandigarh.

10.16 Ironically, the number of primary schools came down from 12401 in the year 1977-78 to 12389 in the year 1982-83. The number of students also declined from 2059161 to 1923943 during the same period. Nor has any significant improvement been observed in the quality of education at this level. This is in spite of the inception of a separate Primary Directorate (1978). This downward trend is factually matched by the upgrading of the erstwhile primary schools.

10.17 But for a few changes at the Directorate level, as indicated above, the management of the system, as a whole, has remained intact, and is by and large based on the proposal made by Shri J. D. Sharma in his report (1961-62).

10.18 The overall charge of the Department of Education vests with the Minister of Education, who lays down the policies and controls the entire administration through the Secretary, Education Department. This Officer is directly responsible to the Minister, and is assisted by a Joint Secretary and two Deputy Secretaries in the Secretariat. These officers are respectively in charge of :

- establishment matters connected with Punjab Education Service and Directorates of Education ;
- Punjab Education Service (Non-gazetted) ;
- Gazetted School Education and Vocationalisation of Education ; and
- Adult Education, Sports, Private Schools, Text-Books and Non-gazetted establishment.

The Secretary to Government also controls the Punjab School Education Board (1969) as well as SCERT which was constituted recently in the year 1982.

10.19 The Department of Education has no linkages with other departments of the Government responsible for man power development, which obviates cooperation and co-ordination in their functioning towards the common goal of human resource development. General Education on the one hand, and Technical Education on the other, work independently. This isolation is an avoidable hindrance in the management of vocational education, whether in the form of Work Experience or training for a specific trade. There is a strong indication for building perennial bridges at all levels right from the top to the grass-roots, if education has to be meaningful and made an instrument of the socio-economic transformation of our society.

10.20 There are three Directorates of Education :—

Directorates
of Education.

- (i) Directorate of College Education.
- (ii) Directorate of Secondary Education.
- (iii) Directorate of Primary Education ; Besides State Council of Educational Research and Training has also been established.

DPI (Colleges) is assisted by a Joint Director Administration, a Deputy Director (Colleges and Planning) an Adviser Directorate of Colleges.

(Reforms Committee), five Assistant Directors and one Accounts Officer. The Joint Director (Admn.), a P.C.S. Officer, deals with establishment matters of the staff at the Headquarters and Principals/Lecturers in Government Colleges. The Deputy Director (Colleges) deals with all educational and University matters, planning and works, besides dealing with cases of the ministerial establishment and miscellaneous staff working in the Government Colleges and Libraries. The five Assistant Directors are respectively in charge of N.C.C., Private Colleges, Scholarships, Sports and Cultural Affairs. The Adviser Education Reforms suggests improvements that could be effected in the system.

10.21 D.P.I. is the link between Government and Private colleges in the matter of release of grants to the latter. In addition, DPI is the ex-officio member of Syndicates and Senates of Universities in the state except the Agricultural University.

Directorate
of Secondary
Education.

10.22 DPI (Schools) is head of the Department controlling secondary education in the State. He is assisted by five officers of the rank of Deputy Director.

(i) Deputy Director (Schools) Administration.

He is further assisted by two Assistant Directors; one of the Assistant Directors is usually a lady who looks after the interest of women teachers.

(ii) Deputy Director (Adult Education).

He looks after all the schemes pertaining to National Adult Education and non-formal education programmes in the state.

(iii) Deputy Director (Vocationalisation).

He is assisted by four subject matter specialists, who are technically trained persons.

(iv) Deputy Director (Books).

He accords approval to the books for school libraries and is also in charge of all privately managed recognised schools in the state.

(v) Adviser.

He is assisted by an Assistant Director (Secondary Education) and an Officer on Special Duty for scholarships.

SPORTS BRANCH :

10.23 For organising the sports activities in the schools there is a separate branch attached to this Directorate. This

branch is headed by an Additional Director who is assisted by a Youth Welfare Officer and a Games and Sports Organiser. In addition to the ministerial staff attached to this branch there are 33 coaches.

10.24 The DPI is also assisted by the following officers in the Directorate.

- (i) Administrative Officer ;
- (ii) Accounts Officer ; and
- (iii) Officer on Special Duty who is of the rank of an Assistant Director to look after planning and works. Among the main activities of the branch, the following are note worthy ;
 - (a) to promote sports in schools ;
 - (b) to conduct tournaments under two categories ;
 - (i) Mini-tournaments for age group 6—11 and 11—14, and
 - (ii) Schools Tournaments up to 19 years as National Schools Tournaments ;
 - (c) to hold summer coaching camps ;
 - (d) to organise pre-competition coaching camps ; and
 - (e) to conduct National Physical Efficiency Drive test.

10.25 DPI (Primary) is assisted by the Deputy Director (Examinations), who is supported by an Assistant Registrar and a Superintendent. Three Assistant Directors also support the DPI through three different pyramids. One of them deals with the budget of Primary School Education; and other two deal with planning and establishment (I) and Care and Establishment (II) there is an Evaluation Officer who looks after teacher education. An Administrative Officer and an Accounts Officer, with a supporting staff, also assist the DPI in administrative matters relating to services. Directorate
of Primary
Education.

10.26 The three Directorates of General Education described above function independently without any effective linkages. This results in wastage of human efforts and material resources through avoidable overlapping and redundant functions. Education, in fact, is indivisible and would not admit of compartmentalisation at any stage in its smooth functioning. Working in isolation implies working towards professional and developmental atrophy. This points to the needs of a strong linkage through a coordinating agency at the top, so as to break the barriers of isolation and to ensure added efficiency through improved coordination and cooperation.

10.27 The state is educationally divided into two circles, each headed by a Circle Education Officer with headquarters at Jalandhar and Patiala (at Nabha). The Districts of Amritsar, Ferozepur, Kapurthala, Gurdaspur, Jalandhar Administrative
set-up
field level.

and Hoshiarpur belong to one circle (Jalandhar) and those of Ludhiana, Ropar, Patiala, Bhatinda, Sangrur and Faridkot to the other circle (Patiala). Circle Education Officer, Jalandhar is assisted by 3 Deputy CEO's. The CEO Patiala (Nabha) Similarly has two Dy. CEO's under him. Each CEO has an Assistant CEO (PT) also. In each circle, there is one Circle Social Education Officer, who is independent in looking after the work of Adult Education.

10.28 The state is divided into three administrative divisions, namely Jalandhar, Patiala and Ferozapore on the basis of revenue organisation. As such, there does not appear to be much justification for sticking to the two educational circles. They should also be coterminous with the revenue divisions for obvious reasons. This reorganisation at the circle level will be conducive to more effective supervision of the academic activities in the circle concerned. To undertake their responsibilities competently the divisional level has had to be provided with extra staff, which could contribute to the constitutional of the third division with only marginal additional staff at minimal cost.

10.29 Each of the 12 districts in the state is headed by a DEO, who is assisted by a Deputy Educational Officer, a Science Supervisor, an Assistant Education Officer (Physical Training) and B.E.O's. Each of the B.E.O's is concerned with the administration of primary schools in his block. There are 228 BEO's in the whole state. The distribution of the various functionaries in each of the circle of the state is given in the table given below :

TABLE 10.3 Field Level Machinery for Educational Administration :

Designation	Number of posts in each Circle		
	Jalandhar	Patiala	Total
Circle Education Officer	1	1	2
Deputy Circle Education Officers	2	2	4
District Guidance Counsellors	2	3	5
Circle Social Education Officer	1	1	2
In charge NFC	2	2	4
District Education Officers (Secondary)	6	6	12
District Education Officers (Primary)	6	6	12
Deputy DEOs (Secondary)	15	13	28
Deputy DEOs (Primary)	4	4	8
District Science Supervisors	6	6	12
Assistant Education Officers (Physical Training)	6	6	12
Block Primary Education Officers	128	100	828
Total	179	150	329

Source: Educational Administration in Punjab (A Survey Report) 1979—NIEPA

10.30 There is a three tier machinery for the administration of schools in the field :

Supervision
and
inspection.

- Circle Level.
- District Level.
- Block Level.

10.31 The CEO, besides controlling, guiding and supervising the work of officers in district and block levels, directly inspects 20 High/Higher Secondary Schools and 20 Middle Schools in the area every year. CEO's are also expected to pay at least one surprise visit to an equal number of schools within the circle every year. The Deputy CEO, apart from helping the CEO in the disposal of routine papers and accounts matters, is responsible for holding enquiries and conducting inspection of some schools in the district. Normally, this officer makes one surprise visit and conducts one annual inspection of 30 High/Higher secondary schools allotted to him in an academic Year.

10.32 One Assistant CEO (Physical Training) is also attached to the circle office. His main job is to coordinate physical education activities in the circle concerned. He is also expected to supervise and coordinate the work of six Assistant Education Officers. This Officer visits at least 50 schools in an academic year.

10.33 Every DEO is to inspect 20 High/Higher Secondary schools and 20 Middle schools in a year. This officer is assisted by a team of Deputy DEO's an Administrative Officer and a supporting ministerial staff. The Administrative Officer helps in office routine matters including accounts and allied non-academic activities. The Deputy DEO is required to inspect 40 Middle schools in a year.

District
Level (Secondary).

10.34 Now all the 12 District Offices are also headed by District Education Officers (Primary). In 8 Districts, they are assisted by Deputy Education Officers in the lower grade. There are 216 Educational Blocks in the State headed by Block Primary Education Officers. In addition, there are also 12 Block Primary Education Officers at the District level to look after the compulsory primary education in their respective districts. Each Block has a post of a clerk who looks after the office work. Besides, 300 JBT teachers work in various blocks for enlistment and enrolment.

District.

10.35 District Science Supervisors and Assistant Education Officers (Physical Education), who are posted on the Secondary side, also look after the Primary Schools in respect of science and physical education for 7 and 4 days respectively in a month. There are some Central Primary Schools, each of which acts as a link between a cluster of 6-7 primary schools and the DEO. This arrangement aims at smoothing the day-to-day administration at the block level.

10.36 The segregation of primary and secondary education at the operational level has, perhaps, helped the administrative management of the fantastic expansion in primary education consequent upon its universalisation. This sudden expansion of primary education did pose a serious management problem at the operational level. Since the infrastructure for it has already been implemented, we do not wish to suggest any organisational changes at this level. But our analysis shows that by doing so what we have gained in terms of administrative management we have lost in educational terms. We have already stated elsewhere that education is indivisible and does not bear a division on administrative considerations. The academic leadership that was previously provided by the Secondary institutions, is now no longer available to them, resulting in serious loss of standards and the quality of education. We would like here to suggest a distinction to be made between administrative management and academic leadership. To retrieve the situation it would appear to us that while the administrative structure up to the block level should remain undisrupted so as not to disturb the administrative management up to this level, the loss of academic leadership sustained at the primary stage as a result of this dichotomy could, however, be restored by accepting the concept of the school complex put forward by the Education Commission (1964—66). It is a commendable idea for several reasons to be discussed later, and we strongly recommend it.

10.35 The involvement of about 300 teachers in the state exclusively for the enrolment of students at block levels is also not a sound practice. It would appear to us that their services could be better utilised in schools where they are most needed. We are not convinced that the B.E.O's need another hand to manage the implementation of the universalization of elementary education at the block level.

Block level.

10.36 There are 228 B.E.O's in the state. These Officers are in charge of primary schools in their respective educational blocks. The B.E.O. is required to inspect 40—60 primary schools in a year. In a study conducted by the National Staff College for Education Planners and Administrators it was revealed that, on an average, one DEO in Punjab had more than 1000 educational institutions including pre-primary and teacher training institutions under his charge. At the same time a DEO had 20 inspection functionaries working under him. Therefore, the average number of institutions under the charge of an inspection functionary at and below district level can be reckoned as 48. This is much more than the permissible norm for effective guidance.

Inspection
plan and
academic
leadership.

10.37 The objectives of inspection are generally identified as providing guidance and encouragement in the process of innovation and improvement in academic attainment. The heads of institutions are given advance 18 notice regarding the dates of inspection, and the inspecting officers prepare inspection reports in the form prescribed for the purpose. Copies

of these reports are forwarded to the next higher officer in the hierarchy of the inspectorate for review and also to the head of the school for follow-up action regarding the suggestions and observations made in the inspection report. The copy received by the head of the school is normally circulated among the members of the staff. The proforma for the inspection report is the same for all stages of school education.

10.38 As per prescribed norms every school, irrespective of stage and standard, is required to be inspected once in a year. Besides, the inspection officers are expected to visit these schools at least twice a year on an unscheduled visit. The main objective of such visits is to assist by surprise checking the normal working of the schools, to observe the punctuality of teachers as well as students in attending schools, to have occasions for personal report with the teachers and, if necessary, to devise ways and means to establish a sort of liason with the community. The inspecting officers are reasonably expected to get first hand knowledge during the course of their visit about the problems and difficulties experienced by the institutions.

10.39 A study conducted in 1979 by the National Staff College for Educational Planners and Administrators, known as NIEPA, provides an insight into the functioning 19 of DEO's. The table given below presents an activity profile of the District Chief of Education. It indicates the percentage of available time spent on academic, para-academic and non-academic activities of the DEO's. Information in this regard relates to 10 out of 12 DEO's. This being a significantly representative example, presents a reliable picture.

Activity
profile of
the D.E.O.

TABLE 10.4 Activity profile of district Education Officers

Serial No.	Name of District	Visits and Inspections	Percentage of Time spent for						
			Travelling	Receiving visitors	Meetings/Conferences	Office work	Any other work	All Activities	
1	Faridkot	..	40	10	10	5	30	5	100
2	Ferozepur	..	50	5	5	5	20	25	100
3	Gurdaspur	..	35	10	10	15	20	10	100
4	Hoshiarpur	..	15	15	25	15	20	10	100
5	Jalandhar	..	33	10	25	5	20	7	100
6	Kapurthala	..	15	10	25	10	30	10	100
7	Ludhiana	..	18	5	7	6	40	24	100
8	Patiala	..	25	5	20	5	40	5	100
9	Ropar	..	18	1	30	10	40	1	100
10	Sangrur	..	25	6	15	4	45	5	100
			26.4	7.7	17.2	8.00	31.0	9.7	100

Source:—Educational Administration in Punjab (A Survey Report) 1979— NIEPA

10.40 It is clear from the above table that a DEO in Punjab makes use of a little more than 1/4th of his time on visits and inspections, which constitute his real academic function. The table indicates that he is obliged to apportion more than 40 per cent of his time for office work and other activities, not directly linked with this officer's academic functions. Consequent upon expansion of education during the intervening period, the District Chief is under added constraints for maintaining even the *status quo* in regard to time for academic work.

10.41 This profile related to the year 1979. As a result of continuous educational expansion during the intervening six years without corresponding addition to the supporting staff the meagre allocation of time for academic functions has been further eroded. This points out to a strong need for supporting academic staff at the sub-divisional level for an effective improvement of educational supervision.

Management
of teacher
education.

10.42 Pre-service teacher education at the post-graduate level is taken care of by the Directorate of Colleges, while that of primary teachers is under the management of the Directorate of Primary Education. There is no co-ordination between the two isolated set-ups for teacher training. It is probably because of this isolation between themselves as well as between them and the job market that all the fourteen training institutions for J.B.T. Teachers pursued a faulty policy of admission resulting in over-flooding of the job market with about 10,000 J.B.T. teachers in 1981.

10.43 In-service education of both primary and secondary school teachers is managed by the S.C.E.R.T. through its three regional In-service Training Centres. Evidently, these three centres cannot cope with the huge task of in-service education, which is a perennial process.

10.44 We have already discussed several aspects of teacher education, including its fragility, in Chapter VII. Here, we confine our observations only to its organisation and management. Teacher education continues to be fragile and fragmentary. Not only is there no linkage between pre-service and in-service training but the different levels of pre-service teachers' education also function in isolation. It has, therefore, failed to respond to the challenges of innovations. The existing isolation between Colleges of Education and the Training Institutes for Primary Teachers and in-service training is not conducive to academic growth and results in ill prepared teachers for all levels of our education. The present situation indicates the need of an autonomous institute, which could provide academic leadership at the highest level for both pre-service and in-service teacher education for all levels. This would also necessitate the reshaping of educational technology, which is today an essential adjunct of teacher education. Proposals for such changes have already been made elsewhere.

10.45 The State Council for Educational Research and Training came into being on 10th July, 1982 with the merger of the Directorate of Science Education and four other units: (i) Educational Technology; (ii) Evaluation; (iii) Vocational Guidance and (iv) Survey. Each of the five state units is headed by an officer of the rank of a Deputy Director. The Science Education Unit takes care of the teaching techniques for various disciplines of science. It provides in-service courses in science education for both teachers of secondary and primary schools. UNICEF aided projects, 2, 3 and 5 relating to primary education and UNESCO sponsored and UNFPA assisted project of population education are also processed and implemented under the care and guidance of this unit.

State Council
for educational
research and
training.

10.46 *The Education Technology Unit.*—is meant to help in the educational process through modern techniques and technologies like use of film strips and media such as radio and television. This unit is also expected to develop lesson scripts for regular broadcasts. The present status of the unit leaves much scope for reorganisation. As educational technology has got to be an integral part of teacher education, this unit could gainfully fit in with some autonomous institute for teacher education, where different types of material may be developed for dissemination through the media like radio and television.

10.47 *The Evaluation Unit.*—conducts its experimental research on the evaluation system in practice in the state. Some innovations are being developed in respect of the objective type tests for covering the maximum syllabi through such tools on evaluation. The head of this unit looks after the three In-service Training Centres located at Jalandhar, Patiala and Ferozepur.

10.48 *Vocational Guidance Unit.*—The concept of guidance at the school level is being disseminated through District Counsellors and Career Masters. Some steps have been taken for initiating a Pilot Project Study in certain schools in the rural and urban areas. This unit, too, has no linkage with the Deputy Director, Vocationalisation of Education, attached to the Directorate of Secondary Education. Their functioning in isolation is not very fruitful in providing effective guidance of in building a befitting infrastructure for diversification at the Plus 2 stage.

10.49 *Survey Unit.*—This Unit is headed by a Survey officer. The unit conducts periodical educational surveys of the State for the development of educational programmes on the lines indicated by the fresh data. This has to be geared up for speeding up the process of collection, compilation, updating and publication of data for timely planning and efficient administration.

10.50 From the information made available to us, it would appear that while some attempts are being made in

these units to function as a support system to the educational process both at the primary and the secondary levels, they are neither adequately staffed nor is there any defined objective for them to follow, with the result that they work in isolation without rendering much support to the system.

10.51 It would appear to us that except for the Evaluation and the Survey Units, none of the units functionally belong to the SCERT; they could be located more profitably in other parts of the system. According to our understanding, SCERT should be responsible for monitoring, research, and development function of the department including inservice training in collaboration with the proposed State Institute of Educational Studies and Development. In addition, it should provide the linkage between the Education Department and the outside agencies with which it has to interact academically and professionally. It should perform the functions of Research and Development Units of the educational system on the general education side.

The Punjab School
Education Board.

10.52 The Punjab School Education Board came into existence by an enactment of the State Legislature in the year 1969.

Constitution of the
Board.

10.53 The Board consists of a Chairman, a Vice-Chairman and the following other members :

1. *Ex-Officio members, namely :*

- (a) Vice Chancellors of the Universities established or that may be established by law in the state.
- (b) D.P.I (S), D.P.I. (P) and Director, SCERT.

2. Nominated members, namely :—

- (a) 5 persons from amongst Principals of Colleges affiliated to any University established by law in the State, members of Punjab Education Service Class I and D.E.O.'s in the service of the State Government, heads of institutions, of whom at least one is a Principal of a College of Education, one Principal of an Arts or Science College and one Head of a High or Higher Secondary School.
- (b) One eminent scholar or writer or scientist, as may be decided by the State Government.
- (c) Legal Remembrancer or Advocate General, Punjab, as may be decided by the State Government.

The members referred in (2) (a) to (c) are nominated by the State Government,

10.54 The Board has set up the following Committees, Committees
of the
Board
namely :

- (a) Finance Committee comprising ;
- (i) Chairman
 - (ii) 4 persons elected by the members from amongst themselves and;
 - (iii) Secretary to Government, Punjab, Finance Department or such officer from that Department as may be nominated by the State Government.
- (b) Examination Committee consisting of :
- (i) The Chairman;
 - (ii) The Vice-Chairman;
 - (iii) The Vice Chancellors nominated by the Board;
 - (iv) The D.P.I., Punjab.

The Finance Committee examines all financial matters pertaining to the Board, including budget estimates, annual accounts and the balance sheet. The Examination Committee appoints the paper setters, examiners and supervisory staff for conducting the examinations. Each Committee submits its report to the Board for such decisions thereon, as it may think fit.

10.55 The Punjab School Education Board's functioning is as follows : Organisa-
tional
Structure
and
Functions

In addition to the Chairman and Vice-Chairman, there is a whole time Secretary of the Board who is assisted by three Directors: one for Academic Planning and Evaluation, another for Production of Text Books and the third for looking after Field Programmes.

10.56 The Director, Academic Planning and Evaluation, is assisted by a Deputy Director and other supporting staff. The main thrust of this section is on curriculum development and the preparation of syllabus and courses of reading. For academic purposes there are subject specialists and assistant subject specialists. The Board sets up a Sub-Committee in each subject or a group of related subjects to frame courses of instruction in the subjects concerned or to propose modification therein for consideration of the Text-book Committee. The Subject Committee may also recommend to the Text-book Committee guidelines or any other specific requirement for being kept in view for the preparation or approval of text-books. The constitution of the Text books Committee is

government by the Punjab School Education Board Regulations, 1979. Besides, this branch also organises field activities and seminars relevant to their function.

1057 The Director, Production of Text -books, gets manuscripts for publication from the Academic Planning branch. He is also assisted by a Deputy Director and other supporting staff such as Production Officer, Assistant Production Officer, Field Officer and Managers of Text-book Depots at the district level. There are Assistant Subject Experts attached to the office of the Production Officer for the scrutiny of manuscripts and, thereafter, of the printed material. This section takes care of printing as well as distribution. In each district there is a text-book depot for the distribution of learning material among different schools. The Statistical Cell attached to this section maintains a complete record of the books printed, distributed and un-sold.

1058 Likewise, the Director, Field Programme, has also a supporting staff, as do the other two Directors. The main function of this branch is to look after the academic growth of the teachers and the welfare of the students. The different activities directed towards realising these objectives are their responsibility.

1059 Under its Educational Development Programme, the Board opened Adarsh Schools and incurred an expenditure of Rs. 45 lakhs during 1978-79 and Rs. 71.90 lakhs during 1979-80. The Board spent a considerable amount on the development of education by way of granting scholarships, preparing text-books (Punjabi) and organising various kinds of field programmes for the benefit of students and teachers. It has made a special provision for educational research and reforms. Funds have been earmarked for seminars, workshops and meetings on educational activities.

Examinations

10.60 One of the essential functions of the Punjab School Education Board is to conduct examinations of the Primary, Middle, High and Higher Secondary stage. The Secretary of the Board is over-all in charge of this unit and is supported by Deputy Secretaries, one each for Examinations Conduct and Secrecy. This branch looks after the organisation and conduct of examinations, preparation of results and issue of certificates.

Curriculum Construction and Production of Text-books

10.61 Curriculum construction and production of text-books are, under the present set-up, functions of the School Board. It would appear to us that while syllabus preparation and development of courses of reading should legitimately be the responsibility of the Board, the proper place for curriculum

construction is in the S.C.E.R.T. The textual material should however, continue to be developed under the care of the Board. Under the present arrangement the review of text-books, when prepared, is also done by the Board. We have looked into this matter and feel that there should be an independent body to perform this function. We suggest that S.C.E.R.T. should undertake this responsibility, which may result in better control over the textual material to be used in our educational system.

10.62 The Board's largest operation is that of production and publishing of books and their distribution, for which they have a large and extensive organisation. This is a purely commercial operation. In our opinion there is no justification for combining this commercial function with the academic function, for which the Board had been specifically constituted. In many States, after the textual material has been produced and approved, it is handed over to a Book Corporation headed by a commercial person, who can handle it much more competently.

10.63 Similarly, it would appear to us that field programmes such as awarding of scholarships, survey of educational institutions, Teachers' and Students' welfare are legitimately the functions of the Education Department, and this responsibility should be squarely shouldered by them. Such duality of purpose and control leads to confusion and shirking of responsibility, which is not in the interest of quality education.

Research and Development

10.64 The School Board's main function should be the conduct of examinations. It should concentrate its activities exclusively on this job. Educational research relating to different aspects of educational processes should invariably be one of the important functions of the S.C.E.R.T. While the Board may collaborate with the latter in providing the requisite data, the overlapping and redundancy, which are generated by the existing set up in respect of research work, need to be eliminated in the larger interest of the Board as well as the S.C.E.R.T.

10.65 The management of the total sports activity in the stage is in the hands of different agencies, namely: Sports Directorate, Punjab, Panchayati Raj Khed Parishad and Punjab State Sports Council, in addition to the Punjab Education Directorates (Schools and Colleges) whose administrative set-ups have already been stated under the Directorate concerned.

10.66 The Directorate of Sports is headed by the Director, assisted by one additional Director (post held in abeyance), one Joint Director, two senior Deputy Directors (one post, vacant), one Deputy Director, three Assistant Directors, and Senior District Sports Officers. In addition there are nine

District Sports Officers, 64 Sports Officers, 99 Junior Sports Officers and 29 Coaches on deputation from the National Institute of Sports. This Directorate was established in 1961, and after the reorganisation of the state in 1966, it was placed under the charge of the Director of Public Instruction to effect economy. In 1975, an independent Directorate of Sports was again created, and the Director of Sports appointed. The Director of Sports is also the Secretary of the State Sports Council. A team of officers who were outstanding sportsmen and sportswomen in their hey day, is assisting the Director in the implementation of programmes relating to the following schemes at the Headquarters as well as in the field :—

- (a) Coaching Camps Schemes;
- (b) Competition Schemes;
- (c) Award of Sports Scholarships;
- (d) Sports Hostels;
- (e) Mountaineering Scheme;
- (f) State Sports Academy;
- (g) Punjab Civil Services Sports.

Punjab
Panchayati
Raj Khed
Parishad.

10.69 The Parishad has an office establishment, which is headed by a Secretary and assisted by a Joint Secretary and other supporting staff. There is a provision of 146 field staff coaches, of which 72 posts are yet to be filled for different games and sports. Among the main activities of the Khed Parishad the noteworthy programmes are as follows :—

- (i) To work under the Plan programmes for the development of games and sports and welfare activities or the youth in the areas of Panchayats.
- (ii) To provide the Panchayats and Panchayati Organisations and institutions with technical know-how along with guidance etc. and the financial help or grants.
- (iii) To implement or to do whatever the Council decides to do from time to time.
- (iv) To act as a coordinator in the field of games and sports between the Development Department of the Punjab Government and the organisations in the rural areas.
- (v) To create stadia etc., under its own jurisdiction and to take care of their maintenance.

10.68 The Punjab State Sports Council is headed by the Chief Minister as its Chairman. The other office bearers of the Council are as under :—

Senior Vice-President	Sports Minister, Punjab
Vice-President	Sports Secretary
Secretary	Director Sports
Joint Secretary	The officer is a whole-time paid employee.

10.69 The State Sports Council functions as an over all umbrella for all sports activities in the State. It is implementing the following schemes for the development of sports :—

- Construction of Sports Complexes;
- Financial Assistance to Sports Bodies;
- Maharaja Ranjit Singh Award Tournaments;
- Pension to Veteran International Sportsmen/women;
- Holding of Summer Coaching Camps;
- Establishment of Rural Sports Centres;
- Purchase of Sports Equipment; and
- Honouring State Teams/Players.

10.70 A review of the various functions undertaken by different agencies for the promotion of sports in the state mentioned above reveals that there is a considerable amount of overlapping in respect of various programmes such as organising coaching camps, holding competitions, purchase of sports equipment, construction of stadia, reception of visiting teams and setting up of sports hostels. It is also clear from these activities that nearly 90 per cent participants involved in these competitions organised by various agencies are drawn from the student community. Participation by non-students is negligible.

10.71 An analysis of the activities of different agencies leads to the following observation :

- There is an overlap in the various programmes of different agencies, which leads to unplanned sports activities;
- Most of the participants are students and, as such, similar type of coaching camps are organised by more than one agency, leading to confusion and wasteful expenditure.

- Multi-organisational control of sports leads the state to unsystematic and diluted coaching programmes resulting in lack of achievement.

Work
experience
and vocational
education.

10.72 Attempts at vocationalisation of education were first made in the Punjab in some selected schools in the year 1975-76, both at the elementary and secondary levels. It is now offered as a curricular subject in 100 elementary (Classes VI—VIII), 200 Secondary and fifty higher secondary schools. It was originally started as a co-curricular activity, but was later included in the school curriculum.

10.73 Students in classes VI-VIII learn carpentry, metal fitting, simple masonry repairs, household wiring, servicing of household gadgets, etc. including the diesel engine. They also learn machine knitting, tailoring, including stitching of garments, machine embroidery etc. The courses offered are uniform for all the students. The schools have been provided with some staff, but very meagre equipment, which is inadequate for training purposes.

10.74 Students of classes IX and X have to opt for vocational subjects in lieu of science or social studies. For class XI it is an additional subject. The existing scheme of vocationalisation both at secondary and higher secondary stages can hardly be called vocational education. It is nothing more than work experience. This is evident from the fact that only 16 per cent of the total time is devoted to these subjects at the secondary and higher secondary levels, and no attempt is made to tie up this training with employment opportunity.

10.75 Similar attempts to give vocational training in agricultural subjects was also made in the Punjab round about the same time, and an infrastructure created for it. An Agriculture Consultant was appointed to look after agriculture education in 182 Government Middle, High and Higher Secondary Schools. There are 631 other schools where agriculture education is also being imparted. On account of non-availability of M.Sc. lectures/B.Sc. Agriculture Masters, 40 out of 133 posts are lying vacant.

10.76 The programmes of vocationalisation indicated above are offered in schools under the department of education. As already indicated, these are nothing more than arrangements offering Work Experience to the pupils in several forms. Single Trade training in vocational trades is not very helpful for placement in the world of work. Training in a group of similar trades is missing. The existing pattern of training, apart from being extremely rudimentary, admits of no horizontal mobility from one stream to another, which is not feasible in the existing educational set-up.

Vocational
Education.

10.77 The concept of vocational education, on the other hand, as put forward by the Education Commission

(1964-66) for the Plus 2 stage, was totally different. They advisedly called it a terminal stage not in its narrow interpretation, but wanted the training programmes at this stage to be linked with employment opportunities. The vocational programmes offered in our schools do not measure up to it.

10.78 That, however, does not imply that there is no vocational education being imparted in the state. All para-medical cadres needed by our health services are trained by the department of health itself. Then we have the organised sector of Engineering trades, where vocational education is being imparted at I.T.I's. Polytechnics etc. They also offer courses in non-engineering trades. Their output is as much as 12,000 per year. This educational effort is organised under the aegis of the Department of Technical Education and Industrial Training. We would, therefore, consider it appropriate to include it within our purview and present a brief description of its existing organisational and managerial set-up.

10.79 The Directorate of Technical Education is responsible for directing and controlling both technical education and industrial training. The Technical Education Wing takes care of Education in Polytechnics, while the Industrial Training Wing looks after training in various engineering and non-engineering trades of Diploma/Certificate level through the Industrial Training Institutions/Centres for boys and girls, special trade institutes and arts and crafts institutes. Training is also imparted in various engineering and non-engineering trades as provided under the Apprenticeship Act, 1961.

10.80 The Industrial Training programme aims at meeting the growing demand of industry for skilled workers by improving the skill of technicians through systematic and scientific training and increasing the employability of educated men and women. This department is also running evening classes for about 450 workers, who are given a chance to improve their technical knowledge and skill and to raise their earning capacity.

10.81 The Directorate is headed by a Director who directs and controls both the Technical Education and the Industrial Training Wings. The Technical Education Wing comprises one Deputy Director (Planning), one Assistant Director-cum-Registrar Examinations and Administration and an Assistant Accounts Officer who looks after the accounts and loans section.

10.82 The Industrial Training Wing has a complement of the following personnel :

- (1) Additional Director Industrial Training
- (2) Joint Director (Craftsmen)
- (3) Deputy Director (Schools) assisted by two Assistant Directors.

The Joint Director (Craftsmen) is assisted by one Deputy Apprenticeship Adviser, who in turn, is supported by one Assistant Apprenticeship Adviser, one Placement Officer and one Statistical Officer. One Deputy Director Administration supported by an Assistant Director (Establishment), looks after the administrative affairs of this wing. Four Assistant Directors, one each respectively, take care of purchase of Machinery, Training, Planning and Inspection. An Assistant Controller of examinations takes care of examination work and a Technical Officer conducts inspection of Industrial Training Centres/Special Trade Institutes.

10.83 At present, training in polytechnics is taken care of by the Directorate of Technical Education and Industrial Training. They are affiliated to the State Board of Technical Education whereas the I.T.Is'/Centres' affiliation rests with the Directorate of Technical Education and Industrial Training. At the moment there is no provision for any horizontal or vertical mobility from I.T.I's to polytechnics. Further linkage with industry is extremely feeble in case of I.T.I's., some of which are situated in rural areas, where opportunities for employment are comparatively limited.

Para-medical
Education.

10.84 The Director, Research and Medical Education looks after the training of para-medical personnel in the state. Nurses, Health Visitors, Laboratory Technicians, Radiographers and Compounders constitute the bulk of the para-medical staff. Training courses for different posts are organised and conducted by Medical Colleges or civil hospitals, depending upon the infrastructural facilities available at the place of training. The annual turn-out of such personnel is about 550.

10.85 If all this effort has to be integrated within the plus 2 programmes, which, indeed, is essential for improving our education and making it more relevant, it goes without saying that some mechanism has to be evolved to bring all this vocational training within the same framework. Elsewhere in our report we have indicated what this mechanism could be.

10.86 The Kothari Commission's recommendations for vocationalisation of education at the higher secondary level envisaged about 50 per cent of the total student population opting for vocational stream. Our poor performance in this respect may ostensibly be linked with :

- (a) isolation between the general and vocational streams of education,
- (b) faculty organisation of the higher secondary education which practically meant nothing more than a simple addition of another year to the high schools,

(c) inadequacy of staff development, and

(d) lack of an effective counselling and guidance service in our schools.

10.87 The proposed changes in the managerial set-up, based upon identification of these deficiencies in the existing system, will be spelt out in the next chapter.

10.88 Cadre position in respect of Primary, Secondary Education and College Education is as follows:—
Cadres.

I. Primary Education

10.89 There is a single district cadre of J.B.T. teachers in the scale of Rs. 400—800 with three steps of promotion in the channel :

1. Head Teacher;
2. Centre Head Teacher; and
3. Block Primary Education Officer.

All the three steps in the ladder are covered on the basis of seniority in service. These posts respectively carry the following scales :

1. Rs. 510—940
2. Rs. 570—1080
3. Rs. 620—1200

All the three steps of promotion available to the J.B.T. Teachers are, at present, on the basis of seniority in service only. The existing arrangement of promotion up to Centre Head Teacher level are satisfactory, but the third step is a supervisory post; as such, it should be a selection post available to experienced teachers with academic and professional qualifications at par with those befitting a Master. A supervisor, obviously, has to be at a higher level of academic and professional equipment.

II. Secondary Education

10.90 The Secondary level is classified into six main grades/cadres of teachers and educational administrators ;

- (i) Classical and Vernacular Teachers ;
- (ii) Masters (Trained Graduate Teachers) ;
- (iii) Lecturers (Post-graduate Teachers) ;
- (iv) Headmasters ;

(v) Principals and Educational Administrators in P.E.S. Class II; and

(vi) Educational Administrators in P.E.S. Class I.

While Classical and Vernacular Teachers are on the District Cadre, all other categories of teachers and educational administrators are on the State Cadre.

10.91 Classical and Vernacular Teachers, though working in a uniform grade of Rs. 570—1080, have been divided into three categories :

(a) Shastris;

(b) Language Teachers, and

(c) Drawing Teachers including Art and Craft Teachers, Physical Training Instructors, Manual Training Instructors and Agriculture Teachers.

Shastris are given five advance increments whereas language All other teachers on the same cadre under sub-classification (c) as stated above, are not entitled to the benefit of any advance increment.

10.92 Essential qualifications prescribed for various sub-cadres of Classical and Vernacular teachers are as follows :—

Shastris	:	Shastri and Professional Training O.T.
Language Teachers	:	Honours in Hindi/Punjabi. Prabhakar, Gyani, followed by Professional Training O.T.
Drawing/Art and Craft Teachers	:	Matriculation, followed by three years of training in Art and Craft.
Physical Training Instructors:		Matriculation followed by a year of training in Physical Education.
Agriculture Teachers	:	Matriculation, J.B.T. followed by a year of training on the Punjab Agricultural University Campus, Ludhiana.

10.93 Shastris, Language Teachers and Drawing Teachers teach classes from VI to X whereas P.T.I's. and Agriculture Teachers are supposed to teach classes from VI to VIII only. Classical and Vernacular teachers, though placed in a uniform grade of Rs. 570—1080, have further been diversified into three sub-categories: (a) Shastris, (b) Language Teachers; and (c) Drawing Teachers. All these

categories of teachers in the same cadre have different starting salaries. There is no justification for this disparity, particularly among the Language Teachers including Shastris. The situation calls for cadre rationalisation, which will be discussed in detail in the next chapter.

10.94 For the Master's grade (660—1200) the minimum qualification is a degree in Arts, Science or other concerned subject with professional training as B.Ed/B.T. This category of Teachers is considered competent for teaching English, Social Studies, Science and Mathematics to classes VI—X, depending upon the subject of study at the degree level. Masters with eight years of service in the cadre are eligible for promotion as Headmaster in the scale of Rs. 700—1580 plus Rs. 20 special pay by direct selection, or otherwise by departmental promotion, also on the basis of seniority in service. Masters with post-graduate qualifications are eligible for promotion as school lecturers as well.

10.95 For the Lecturer's grade (700—1300) the essential qualifications are post-graduation in the respective subject with a year of professional qualification—B.Ed/B.T. This category of teachers was originally required for the Higher Secondary stage, but in actual practice their services are utilised for lower secondary classes also.

Headmasters vis-a-vis School Lecturers

10.97 Headmasters in the scale of Rs. 700—1580 plus Rs. 20 personal pay, with 5 years of service in the cadre are eligible for promotion to Class II in the scale of Rs. 825—1580 by direct selection against 25 per cent of the posts advertised for open selection. Others are promoted on the basis of seniority. Both headmasters and school lecturers, on the basis of their seniority, are promoted to PES-II in the ratio of 60:40 against 75 per cent of the posts earmarked in the scale of Rs. 825—1580. Twenty-five per cent of them are in the selection grade of Rs. 1200—1700. Personnel borne on this cadre are Principals, D.E.O's, Deputy D.E.O's, Deputy C.E.O's, Assistant Directors, Senior Lecturers in the In-service Training Centres, and Coordinators. P.E.S.I. is in the scale of Rs. 1200—1850. This cadre includes CEO's, Deputy Directors and Principals of In-service Training Centres. Besides, there is an excadre post in the scale of Rs. 1775—2200 for Additional Director Physical Education.

10.97 D.P.I.(S), D.P.I.(P) and Director, SCERT are in the identical scale of Rs. 2300—2500. The D.P.I.(S) is selected from amongst the members of PES-I having at least two years' experience.

III. *College Education*

10.98 There is single cadre of teachers, lecturers in the running grade of Rs. 700—1600 with the next step of promotion as Principal or a Deputy Director in PES-I in the scale of

Rs. 1200—1900 with provision of selection grade of Rs. 1500—2500 for 10 per cent of the posts in the cadre of Principals. The essential qualifications for the post of lecturer is a good second class in M.O./M.Sc./M.Com. etc. Lecturers with eight years of service are eligible for promotion as Principal by direct selection. Fifty per cent posts of Principals are filled by direct selection and 50 per cent by departmental promotion on the basis of seniority. DPI(C) in the scale of Rs. 2300—2500 is selected from amongst the members of PES-I having at least two years' experience.

10.99 There is no intermediary stage in between a lecturer and a Principal. It is felt that the absence of such a stage leaves little incentive with the teachers. This points to the need of some promotional avenue, on the basis of length of service, both through departmental promotion and direct selection.

CHAPTER XI

PROPOSED CHANGES IN EDUCATIONAL ADMINISTRATION

11.01. We have described the existing administrative setup in its chronological perspective in the preceding chapter. This chapter will, however, project some proposals aiming at more effective coordination and cooperation among different functionaries and organisational levels relating to education. The major changes are largely determined by the Plus 2 innovation. The State has long lived through 10-year schooling and also the 3-year Degree Course at the tertiary level. The crux of the managerial or organisational problem, therefore, lies in streamlining the set-up so as to ensure a successful implementation of the Plus 2 programmes. This new level, being predominantly a stage for feeding the world of work, calls for a sharper focus. Fulfilment of objectives at the Plus 2 stage will not only enrich the world of work, but also pave the way for strengthening the tertiary level of education.

11.02. What is envisaged at the Plus 2 stage is an integrated approach towards vocational and general education. We have tried to break the existing isolation between the two streams. In fact, our national goals of productivity and modernisation can only be pursued through a system which provides continued collaboration, cooperation and coordination between the two streams.

11.03. Linkages in the managerial set-up at the top level and common affiliation with the Board of Senior Secondary and Further Education for the Plus 2 stage as well as for the vocational and technical institutes, are expected to provide a sound footing for man power development. Cultivation of vocational skills, in addition to academic learning, is reasonably expected to emerge out of the proposed linkage between general and vocational education.

11.04. The existing Segregation between Primary and secondary education at the district level, obviously, has resulted in the loss of academic leadership. School complexes which constitute the main plank of the proposed set-up, are just unthinkable in the existing isolation between the two levels. The proposed managerial integration of the primary and secondary levels of education at the complex and district levels is expected to provide the missing link.

11.05. Adequate involvement of the community at different levels of management is not only desirable but also pragmatically rewarding in a democratic structure of society. We have therefore, recommended advisory councils, at various levels. Such Councils/Committees, while reflecting local needs and aspirations, provide opportunities for the mobilisation of human and material resources, for their optimal utilisation and for better performance towards quality education.

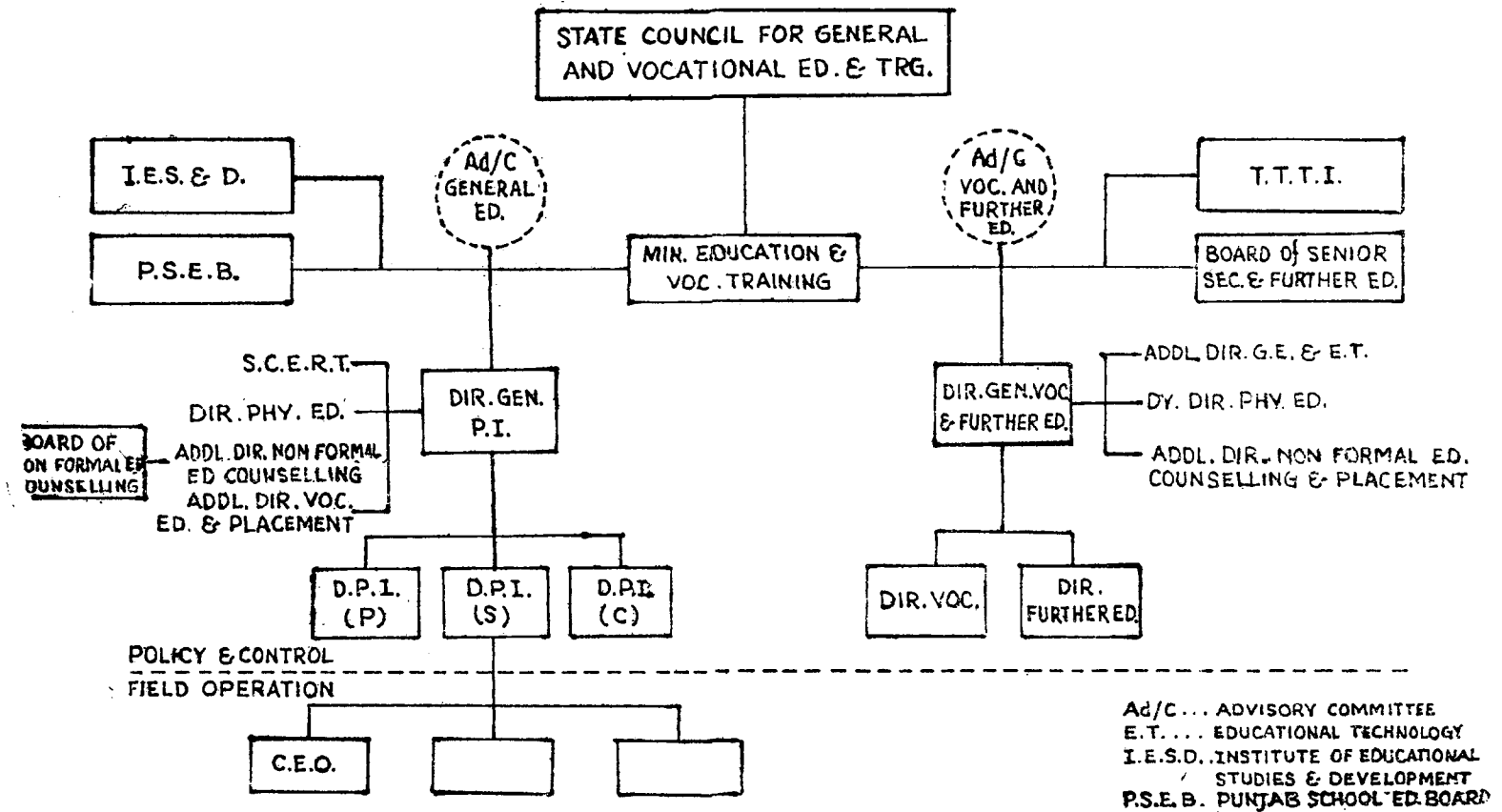


DIAGRAM II.1 — PROPOSED ORGANIZATIONAL SET-UP (POLICY & CONTROL)

11.06. While stagewise deficiencies of the existing set-up have already been identified in the preceding chapter, a synoptic and synthetic view has been projected here as a pre-factory note to the proposed set-up that follows.

11.07. There is no linkage at present between general education and vocational education. Both of them work in isolation, which is both logically and psychologically unsound for an effective man power development. The vocationalisation of education, particularly through the innovation of the Plus 2 stage, necessitates a permanent mechanism for interaction between the two intrinsically inseparable streams of education.

11.08. We, therefore, propose a State Council for State General and Vocational Education and Training consisting of 23 members to serve as an apex body for the management of total education in the State. Diagram 11.1 and 11.2 present a representative picture of the proposed administrative set-up concerning both general and vocational education. The Council will be headed by the Chief Minister, advised by the Minister for Education and Vocational Training and assisted by the Secretary Education and Vocational Training, who will coordinate the working of the two Departments and be in charge of both. The Director General, Public Instruction (General Education), and Director General (Vocational and Further Education) will be *ex-officio* members of the council. The Vice-Chancellors of all the universities in the state, Director of Health Services, representatives of the Punjab and Delhi Chamber of Commerce and Industry, Director SCERT and Chairman of the Board of Senior Secondary Education and the Punjab School Board of Education will also be members of the council. Both the posts of Director Generals, in the proposed set-up, are new. Their rationales is to provide the missing linkage among several directorates for professional leadership. In addition to the above mentioned members, there would be nine persons, representing different interests such as Agriculture, Industry, Science, Engineering, Medicine, Commerce and Banking, Literature and Art, Education Management and Mass Media. These persons will be eminent in their own fields, and will be nominated by the government for a period of three years, one third of them relinquishing every year to provide continuity. The Council will guide and control both the departments of education (a) General Education and (b) Vocational and Further Education. Both the wings will be under the same minister.

11.09. There will be two Advisory Committees; one for General Education and another for Vocational and Further Education. Both the Advisory Committees may be headed by the Minister for Education, assisted by the Deputy Minister concerned, if any,

Advisory
Committee
General
Education.

11.10. The Advisory Committee for general education to be headed by the Minister for Education may comprise 25 to 30 members, including the Director General Public Instruction, Director General Vocational and Further Education, Director SCERT, Director Institute of Educational Studies and Development, Director Physical Education, Additional Director Vocationalisation, Chairman of the School Board, Chairman of the Board of Senior Secondary and Further Education and all the three DPI's representing Primary, Secondary and College Education. This structure leaves scope for the nomination of 12 to 15 eminent persons from different fields of life relevant to General Education, including 3 MLA's and 5 eminent teachers from different levels of education.

Education.
Secretary.

11.11. In our view, it is not only relevant but also essential to have an eminent educationist as Education Secretary in order to ensure uninterrupted coordination and supervision in educational administration and academic leadership. As education is becoming more and more professionalised, it points to the need of an educationist on top of the managerial set-up.

Director
General
Public
Instruction
(General
Education).

11.12. Under the existing arrangement the Directorates of Primary Education, Secondary Education and College Education function as separate entities in a state of virtual isolation. This compartmentalisation leaves little scope for effective continuity of educational experiences through the successive stages as also for professional leadership in education as a whole. This is a tremendous handicap in proper educational planning and deployment of available fiscal resources. It was only for the sake of administrative convenience, taking a short term view, that separate directorates were set up. But the intrinsic link necessitated by the indivisibility of education has got to be maintained for effective monitoring and evaluation and an uninterrupted pursuit of improvement in the process of education right from the primary to the tertiary level. It is, therefore, recommended that the Director General, Public Instruction, under the proposed set-up, may provide that link.

11.13. To reiterate, the DPI was *ex-officio* Secretary to the Government during the pre-independence period. He invariably used to be an educationist of outstanding merit. The Director General, Public Instruction, as such, should be an educationist to be selected from amongst the members of PES-I, with at least three years of service as DPI or in an equivalent post. He will be able to work more effectively, if he is an *ex-officio* Additional Secretary to the Government. In fact, we consider his *ex-officio* status as additional Secretary most important for vitalising education by way of raising his decision making responsibilities. The disposal of routine business tends to be delayed under the existing arrangement because of the unnecessarily long administrative channel for decision making.

11.14. Linkage between the Departments of General Education and Technical and Vocational Education would evidently generate work which may be too much for the Education Secretary to manage single-handed. The *ex-officio* position of both the Director Generals as Additional Secretaries would be most desirable and strategic in the sense that it could help in streamlining the administration, and facilitating the disposal of work efficiently and promptly.

11.15. The creation of a new coordinating link at the Directorate level, in fact, does not lengthen the channel but simply raises its responsibilities. Assisted by his DPI's with Under-Secretaries Planning and Administration and his personal supporting staff, the Director General, Public Instruction should be able to discharge the responsibilities of his office. The offices of the Director General Public Instruction and his DPI's should be joint so as to ensure that they work together as an organic unit. It would also be pertinent to recommend that the office of the DGPI should be treated on a par with the Secretariat. This parity with the Secretariat is essential in the context of the Director General's *ex-officio* position as an Additional Secretary.

11.16. The proposed arrangements spelt out above Administration would also streamline the control and coordination of financial and administrative matters at the level of the directorates in the department. Scrutiny of the existing arrangements has revealed some inconsistencies in their management. For instance :

- (a) Administrative and financial powers in respect of ministerial establishment at headquarters of all the three directorates rest only with the DPI (Secondary);
- (b) DPI (Colleges), while exercising financial control over the field establishment, has no powers for management of financial matters pertaining to his own directorate;
- (c) DPI (Primary) has to route his budgetary matters through DPI (Secondary Education) while exercising only some residual financial powers over his own set-up; and
- (d) The Director, SCERT, despite being equal in status to a DPI, has no powers or control over financial matters relating to his own directorate.

Joint control over financial matters in respect of the elementary stage is understandable, because a part of it is attached to the secondary schools, but as head of a directorate, the DPI (Primary) and, for that matter, other DPI's including, of course, the Director SCERT and the Director Physical Education, should have been given full administrative and financial

powers relating to their respective spheres. In view of this the situation remains confused, for nobody is prepared to shoulder responsibility squarely. The proposed DGPI as head of the department, while acting as a coordinating link, should be able to get over these anomalies by delegating full financial powers to the concerned DPI's including other directors of equivalent status to ensure efficient functioning in their respective spheres.

Directorates
of Colleges
and Secondary
Education.

11.17. In addition to what has been stated in the preceding paragraph, we do not envisage any other organisational change in the College Directorate because of the viability of the existing administrative set-up. In view of considerable expansion at the secondary level, due to vocationalisation at the Plus 2 stage in schools and present inadequacy in the existing managerial set-up, we propose one Additional Director Administration and Planning, to assist the Director of Public Instruction (Schools) or DGPI preferably the latter.

11.18. Requirement in respect of Deputy Director/ Assistant Directors, Subject Specialists and the other supporting staff may be worked out by establishment experts.

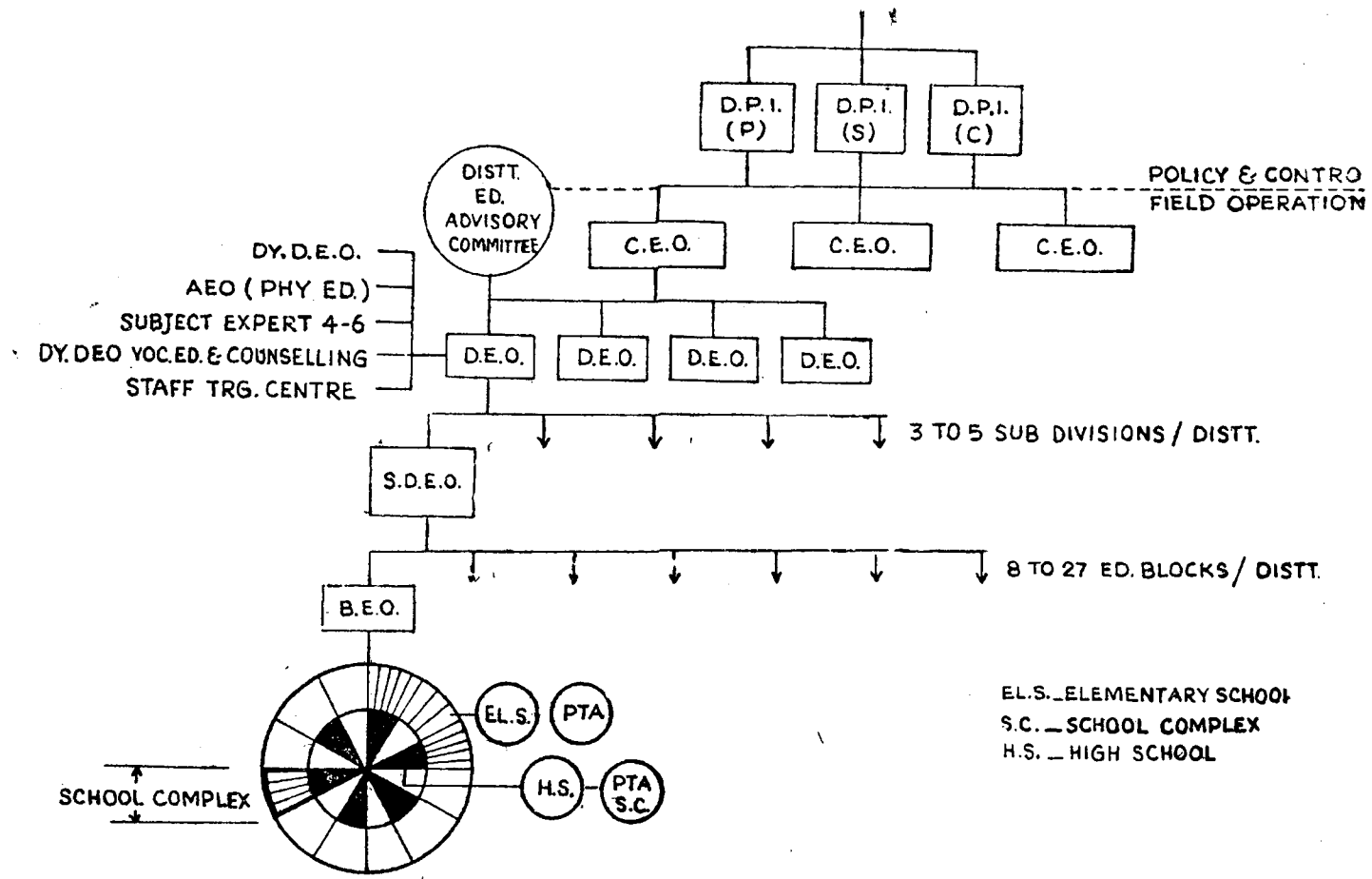


DIAGRAM II.2 PROPOSED ORGANIZATIONAL SET-UP (FIELD OPERATION)

Directorate
of Primary
Education.

11.19. As the main focus of the Directorate of Primary Education is on the universalisation of elementary education, we propose an additional post of an Assistant DPI in this Directorate for monitoring and directing the functioning of non-formal education centres for the rehabilitation of dropouts in the age-group of 6—14. The unchecked population explosion in the state calls for continued and concerted efforts in this area as well. The proposed arrangement is expected to strengthen both the formal and non-formal streams of education at the elementary level.

11.20. Non-formal education which has already assumed new dimensions in response to our pressing needs, will, under the proposed set-up, be placed under the charge of a separate Additional Director who will assist the DGPI directly. The nature and scope of his functions will be described elsewhere in this chapter.

Field
Organisation.

11.21. Under Revenue Organisation, the State is divided into three Divisions, namely, Jalandhar, Ferozepur and Patiala. It logically follows that Educational Circles should also be coterminous with these divisions. Each circle in the proposed set-up will comprise four instead of six districts for effective coordination, supervision and academic guidance.

Circle
Level.

11.22. The Circle Education Office under the existing set-up has no link with primary education, which appears to be odd and, consequently, weakens the whole chain of management. The fate of physical education is also the same at this level. We, therefore, propose 5 Deputy CEO's, one each for Primary Education, Secondary Education, Non-Formal Education and Counselling, Vocational Education and Placement, and Physical Education. Such an organisation, based on specific roles, is expected to streamline the management with added efficiency, while integrating non-formal and adult education with the general education set-up. We are convinced that non-formal education and vocational education will receive much higher priority and emphasis in education in future and our organisation at this level should be capable of coping with it.

District
level.

11.23. The district level, under the existing arrangement, is spilt up into two separate primary and secondary organisations, which does not admit of efficient functioning of school complexes. School complexes, obviously, necessitate collaboration of high/higher secondary schools with the primary and middle schools for purposes of academic interaction. Isolated set-ups, as such, are not conducive to the efficient functioning of the educational process. We, therefore, propose all educational units pertaining to both primary and secondary levels to function under the District Chief of the education set-up.

11.24. Under the proposed management the DEO's may be assisted by 7 Deputies, one each, for secondary education,

Primary Education, Non-formal Education and Counselling; Vocational Education and Placement; Coordination and General Management; Planning and Supervision; and Aided Schools. The Deputy DEO in charge of planning and supervision may be assisted by subject specialists, one each, for Science, Mathematics, English, Hindi, Punjabi, Social Studies, Vocational Education and Physical Education.

11.25. The Activity Profile of the DEO, as projected in Chapter X, clearly indicates that he can barely find 25 per cent of the total time for academic work which deserves top priority. It is, therefore, proposed that the District Chief should be provided with additional academic staff at the sub-divisional level. This level already exists in the neighbouring State of Haryana. There are 45 sub-divisions in the state. Their districtwise number ranges from 3 to 5. Both Amritsar and Patiala districts have the top tallies (vide Table 11.1).

11.26. Under the proposed set-up, a sub-division will be headed by a sub-divisional education officer, who will look after the secondary schools in the area concerned. All Sub-Divisional Education Officers in the district will be directly responsible to the District Education Officers. This Officer will be assisted by a senior coordinator, planning and supervision and 3 coordinators one each, for Secondary Education, Physical Education and Non-formal Education and Counselling.

11.27. We recommend the creation of a District Education Advisory Committee for advising the DEO on educational matters from time to time. Headed by the District Education Officer, the District Education Advisory Committee will comprise 20 members, including :

District Education Officer	1
Deputy DEO (Inspection Secondary)	1
Deputy DEO (Inspection Primary)	1
Heads of High Schools	3
District Officer, Vocational Education and Placement	1
District Officer, Non-Formal Education and Counselling	1
B. E. O.	1
Heads of Primary Schools	2
Eminent citizens from various fields of social activities including PTA and Heads of Inservice Centres	9
Total :	20

Sub. National Systems Unit,
National Institute of Educational
Planning and Administration
 17-A, Sri Aurobindo Marg, New Delhi-110016
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11.28. The role of the District Education Advisory Committee may include District level education planning; assessment of the need for resources; evaluation of better and weaker schools; and periodical examination of the issue of drop-outs and causes thereof for suitable remedial measures. This role, entailing constant activity, is expected not only to keep the Committee as an active, functioning body but also to help in projecting and piloting the need based planning for better education in schools. The evaluation of both positively and negatively skewed schools may provide solid information which may be effectively used for bringing about progressive qualitative and quantitative improvements in school management.

Block
Education
Officers.

11.29. Statistical data pertaining to the year 1982-83 presented in Table 11.1 show that there are 12389 primary schools in the 228 Educational Blocks of the State. The average number of schools under the charge of a Block Education Officer works out to be 54 which is more than he can supervise. The blocks should be so readjusted that the number of primary schools in a block should not normally exceed 40—45. In view of the expansion of education, the block formation should be constantly reviewed for readjustment after every five years.

**TABLE - II.1 PUNJAB : A COMPARATIVE VIEW OF SCHOOLS
AT DISTRICT AND EDUCATIONAL BLOCK LEVEL**

S.NO.	DISTRICT	TEHSIL/ SUB-DIVISION	EDUCATION- AL BLOCK	HIGH SCHOOL PER TEHSIL	SCHOOLS PER DISTRICT			SCHOOL PER EDUCATIONAL BLOCK			ELEMENTARY SCHOOL/ COMPLEX
					HIGH*	MIDDLE	PRIMARY	HIGH	MIDDLE	PRIMARY	
1	2	3	4	5	6-A	6-B	6-C	7-A	7-B	7-C	8
1	AMRITSAR	5	27	56	279	169	1487	10	6	55	6
2	BATHINDA	4	12	42	166	105	629	14	9	52	4
3	FARIDKOT	3	16	78	235	115	739	15	7	46	4
4	FEROZEPUR	3	22	52	156	137	1130	7	6	51	8
5	GURDASPUR	3	23	64	192	135	1327	8	6	58	8
6	HOSHARPUR	4	23	56	224	139	1436	10	6	62	7
7	JALANDHAR	4	25	74	294	168	1177	12	7	47	5
8	KAPURTHALA	3	8	30	89	66	486	11	8	61	6
9	LUDHIANA	4	21	70	280	128	1011	13	6	48	4
10	PATIALA	5	22	40	200	134	1272	9	6	58	7
11	ROPAR	3	14	44	131	69	867	9	5	62	7
12	SANGRUR	4	15	50	200	106	828	13	7	55	5
TOTAL		45	228		2446	1469	12389				

* HIGH SCHOOLS INCLUDE HIGHER SECONDARY AND 10+2 SCHOOLS
NOTE : DATA REFER TO THE YEAR 1982-83.

11.30. Every school, irrespective of its stage and standard under the existing norms of inspection, is expected to be visited twice and inspected once a year. The actual practice, however, rarely conforms to this norm. While agreeing to the norm, we would like to insist on its actual practice. SDEO's in the proposed set-up, it is hoped, would share much of the DEO's academic, supervisory and administrative functions and the allied activities. This would provide much needed relief to the DEO who, for inspection, may focus his main attention on the senior secondary schools. The SDEO, in the proposed set-up, would look after the high and middle schools, while the BEO's will take care of primary schools.

11.31. The DEO may associate a panel of 5-6 lecturers, including 1-2 Principals of senior secondary schools, 5-6 faculty members from the Plus 2 stage of colleges and subject specialists of his own office for inspection of the Plus 2 stage both in schools and colleges. Similarly the SDEO may associate a panel of 5-7 masters, including 1-2 headmasters, along with subject specialists from the DEO's office, for inspection work.

11.32. As per recommendations of Shri J. D. Sharma in his report (1961) on the reorganisation of the Punjab Education Department, 3 middle schools, for the purpose of inspection, were equated to 2 high/higher secondary schools. On the basis of this norm the average number of schools falling under the jurisdiction of an SDEO works out to be about 76. This officer may conveniently share his load of inspection work with his Senior Coordinator Planning and Supervision, Coordinator Secondary Education and other colleagues.

11.33. In the case of Primary school, the BEO may associate a panel of teachers from adjoining school complexes for the purpose of inspection. Since much of the academic leadership of primary schools in the proposed set-up goes to the school complex management, he is expected to devote added attention to inspection work. The head of the complex, or his nominee, may be reasonably expected to extend cooperation in this task.

11.34. Circle Education Officers/District Education Officers, on their own, would do well to inspect or visit a representative sample of schools, covering all categories. Table 11.1, giving a comparative view of schools, presents a total of 2446 high, 1469 middle and 12389 primary schools. The average number of high, middle and primary schools for a circle works out at 850, 490 and 4130 respectively. The average for a district in the same sequence is 204, 122 and 1032. The CEO, with the help of his supporting staff, may effectively inspect 1 per cent of the senior secondary/high and middle schools and 5—7 randomly selected primary schools in a year. Similarly, the DEO, in addition to his main charge of senior secondary schools, may randomly select 10—15 schools, covering all categories, for inspection. Thus the total number of schools for annual inspection for a DEO may range from 35 to 40, including an average of 20—25 senior secondary schools in a district.

11.35. The proforma for the inspection of schools, as recommended in the report on the Reorganisation of the Punjab Education Department (1961-62), is fairly exhaustive and admits of objective assessment of a school irrespective of its stage and standard. This proforma, however, takes little cognizance of the innovative activities, which may also be included among the components for appraisal. All inspection reports need incorporation of comments on the action indicated in the preceding inspection reports. The District Advisory Committee may periodically review the inspection reports. The inspecting officers, while sending their reports to the quarters concerned, would do well to endorse copies to the concerned CEO also to ensure effective monitoring.

11.36. The school complex is evidently an effective and economical organisation for pooling and sharing both human and material resources for the management of education at the grass-root levels, as suggested by the Education Commission (1964—66). The complex, while breaking the isolation of schools, will give the constituents a genuine complexion of a cooperative group. Adequate financial powers and responsibilities will have to be delegated to the nucleus school, which would invariably be a high/senior secondary school in the complex. The nucleus school would be expected to provide the required academic guidance to primary and middle schools in the complex. Selected teachers from the constituent schools may constitute a supervisory panel for academic guidance and leadership. Besides, a school complex may be gainfully used as a unit for the introduction of experimental innovations in education. A judicious sharing of academic experience and material resources is expected to reinforce not only the mutual cohesion of the constituents but also the teaching learning strategies. Learning Resource Centres, as mentioned elsewhere, would provide adequate support in educational technology and counselling to the schools concerned in a complex.

11.37. The number of high/higher secondary schools in each of the 228 Education Blocks ranges from 7 to 15 and the average works out at 10. Reckoning the number of primary and middle schools in every block, on the basis of 1982-83 statistics, the average number of schools to constitute a complex is 6, which is quite manageable. Please refer to Table 11.1 for the relevant statistical data.

11.38. Since PTA's are as suggested elsewhere functioning reasonably well in schools in the state, though their functioning could be improved, it is considered worth while to associate them more intimately with the educational affairs of the school complex. A Complex-level PTA, representing every constituent of the complex, can gainfully function as a sort of advisory body for providing effective support to the system. While at the school level the interaction of parents and teachers is a continuous process, the Complex level PTA may meet once in three months and, at the sub-divisional level,

a combined meeting of heads of school complexes and the concerned BEO's may also be held quarterly for mutual interaction. This forum may be effectively utilised for exchange of experience in respect of the innovative activities pursued in a particular complex. Such an appreciation and recognition at this level may be conducive to further emulation and escalation.

11.39. The DEO's may also hold biannual meetings of all SDEO's in the district for an effective monitoring of the academic activities at complex level. On the basis of this feedback, as also of inspection reports received from different quarters, the DEO, or one of his senior deputies, may coordinate with the Principal of the Centre for In-service Training and Educational Technology as well as Heads of the Learning Resource Centres which, in the proposed set-up, are linked academically with the Institute of Educational Studies and Development, but administratively with the District Chief for their day-to-day functioning for inservice training programmes needed at the various complexes.

Learning
resource
centres.

11.40. Learning Resource Centres, as mentioned elsewhere, would be set up in the senior secondary schools in the first instance. These centres could be effectively utilised for continuing in-service education of teachers and educational technology and counselling support. Eventually, the leading school of every complex would be expected to have its own centre for providing educational technology support for staff development of the schools concerned.

Institute of
educational
studies and
development.

11.41. As mentioned in Chapter X, teacher education at the post-graduate level is taken care of by the Directorate of Colleges and at the undergraduate level by the Directorate of Primary Education. There is no linkage between the two set-ups, which function in isolation. Coordination between pre-service and in-service education is also completely missing. As already mentioned elsewhere teacher education continues to be fragile and fragmentary. The Colleges of Education and the Training Institutes for JBT Teachers are in need of regular academic leadership for dynamic functioning in response to the changing needs. Mediocrity in teacher education could be reasonably attributed to a protracted absence of pace setting courses.

11.42 All this points out to the need for an autonomous Institute for Teacher Education to provide quality orientation for all categories of teachers. We have separately recommended that such an Institute be established, the details of which are given in chapter VII. This institute will maintain the standard of teacher education by providing academic guidance and leadership. The units of Educational Technology, Science Education and Evaluation, which, at present, are parts of SCERT, will, under the proposed set-up, be an integral part of this new institute. It will have its own Boards of Studies pertaining to different disciplines of teacher education and

media technology. It will take care of both pre-service and in-service education of both primary and secondary teachers, while preparing instructional and training materials for various programmes at the district as well as the state level. Under the direct supervision of this institute will be the centres for In-service Training and Educational Technology at district headquarters. They will be concerned with in-service education of both primary and secondary teachers. The existing Regional Inservice Centres will be reorganised as Centres for In-service Training and Educational Technology and will function under the academic leadership of this institute. These district level centres will maintain uninterrupted linkages with the school complexes through the Learning Resource Centres where in-service courses may be held from time to time. Such an arrangement will not only be economical, but will also enhance the importance and reinforce the functioning of school complexes for the qualitative improvement of education.

11.43. The sports activities in the state are controlled at present by five different agencies, namely :

Directorate
of Physical
Education
and Allied
Agencies.

1. Directorate of Sports;
2. Punjab Panchayati Raj Khed Parishad;
3. Punjab State Sports Council;
4. Directorate of Colleges; and
5. Directorate of Schools.

Their overlapping activities have already been discussed in Chapter X. The same types of coaching camps are organised by all of them. More than 90 per cent of the participants in such programmes are students from the educational system; whereas the clientele from non-student youth is insignificant. In the absence of proper coordination the outcome is not satisfactory.

11.44. With a view to eliminating redundance and ensuring productive pursuits in the field of Physical Education, we recommend only 3 agencies, namely, (1) Directorate of Physical Education, (2) Punjab Panchayati Raj Khed Parishad and (3) Punjab State Sports Council.

Directorate
of Physical
Education.

11.45. Directorate of Physical Education, under the proposed set-up, may comprise the existing sports wings of the Directorates of Schools and Colleges, and will be an integral part of the whole educational set-up. This Directorate will assist the DGPI in directing, controlling and coordinating all sports activities pertaining to both schools and colleges including, of course, the colleges of physical education and sports academies.

11.46. We propose that this Directorate should function through three sections : (1) Planning, Training and Research;

(2) College Sports and Games and (3) School Sports and Games. Each will be headed by an officer in the rank of a Deputy Director. A separate Deputy Director, Physical Education will be attached to the Director General, Vocational and Further Education for organising and coordinating sports activities in polytechnics, ITI's and Special Trade Institutes, Art and Craft Teachers' Training Institutes, Industrial Schools and other similar centres. Requirement of the supporting staff may be worked out by experts in the field.

Punjab
Panchayati
Raj Khed
Parishad.

11.47. This agency will look after sports and youth welfare activities among non-students in the panchayat and urban areas. The Parishad will provide technical know-how and financial help to Panchayats, construct playgrounds and look after their maintenance in the proposed set-up. This agency can exclusively focus its attention and efforts on the promotion of games and sports among non-student youth, in the villages and rural areas outside the school system.

Sports
Council.

11.48. The existing Sports Council with its well defined functions could really do well to act as a sort of coordinating agency both for student and non-student clientele. Through adequate coordination, this Council can help in locating and developing real talent in sports for national as well as international level competitions and oversee the whole sports activity in the state.

Board of
non-formal
education
counselling.

11.49. For a sharper focus on continued, rehabilitation of drop-outs in the age group of 6—14, we have already recommended a separate functionary in the Directorate of Primary Education. Here our concern is about all other age-groups of adults who may pursue education through non-formal agencies, namely, adult education centres and distance teaching set-ups as well as the non-recoverable drop-outs in the formal education system.

11.50. The concept of non-formal education is gaining new dimensions in the fast changing scenario of knowledge explosion. A very small percentage of the total population pursues studies through the formal education system. A large majority would have to be covered under the non-formal education for achievement of the stipulated targets in the adult education and continuing education programmes. Our efforts at present are much too diffused to produce any impact.

11.51. We are of the considered opinion, after a careful appraisal of the whole situation, that there should be a separate Additional Director for Non-Formal Education and Counselling, who may assist the DGPI for directing, controlling, monitoring and funding all agencies of non-formal education. This officer will also direct the counselling programmes relating to both formal and non-formal agencies, for which he

would be assisted by a Deputy Director Counselling. As Counselling is a professionalised programme, we are of the view that all such posts, from the Directorate to the field level, should be manned by professionally trained personnel. The head of this office may be supported by an Advisory Body comprising 15—20 members representing the non-formal and formal education and other concerned interests, and to be designated "Board of Non-Formal Education and Counselling."

11.52. The main functions of the Punjab School Education Board, as mentioned in Chapter X, are :

Punjab
School
Education
Board.

1. Curriculum development, preparation of syllabus and development of courses of reading;
2. Production and distribution of text-books;
3. Looking after field programmes for the academic growth of teachers, and students' welfare; and
4. Conduct of examinations.

11.53. We are of the considered opinion that the Board should concentrate on the vital function of examinations, which is their main responsibility. While curriculum construction should essentially be the function of the SCERT, the Board should, however, continue to handle the preparation of syllabii and the development of textual material. The syllabii and textual material developed by the Board should, however, be reviewed by the SCERT. Such an arrangement would help to reflect the feedback from the field duly monitored by the SCERT.

11.54. Field programmes like running modal schools and awarding scholarships, etc. should fall within the purview of the State Education Department to avoid overlapping and redundance. Similarly, research and development programmes legitimately belong to the SCERT. For the publication and distribution of text-books, we are recommending a separate agency to be known as the Text-Book Corporation, which will be described later. As we envisage a separate Board of Senior Secondary and Further Education, the existing Board should restrict its functioning up to the lower secondary level only. The Plus 2 stage will be attached to the other Board which, for the take of convenience, will be described a little later.

11.55. For the qualitative improvement of evaluation at all levels of examination, writing syllabii for the courses of study to be followed in each subject and the production of textual material, we recommend a separate statutory Board of Studies for different disciplines. Five to seven eminent teachers of the subject concerned, from schools and colleges, may constitute a Board of Studies. Periodical observations of

these Boards should be widely circulated among all concerned with education at different levels. In fact, it would be their responsibility to ensure that syllabii and textual material are regularly up-dated.

Punjab Text
Book
Corporation.

11.56. The publication, supply and sale of text books involve professional and commercial expertise. As such this function should be separated from the academic function of syllabus design and getting textual material prepared, which tends to lose its importance, when combined with commercial activities. We, therefore, propose a separate corporation for the publication and distribution of textual material right up to the Plus-2 stage. The present section of the School Board dealing with the publication and distribution of text-books may be separated and constituted to form this autonomous corporation.

11.57. The Text-Book Corporation may be headed by a Chairman to be assisted by three Directors, one each, for Primary, Secondary and Senior Secondary levels. Each wing may be supported by a Production Officer, an Assistant Production Officer and the supporting staff for the scrutiny and supervision of printing processes.

11.58. All the three wings may be supported by Field Officers for maintaining strong liaison with the Text-Book Depots to ensure effective distribution of text-books and proper periodical inspection of stores.

11.59. Curriculum construction and text-book review under the proposed set-up will be done by the SCERT for general education, and by the TTTI for technical and vocational courses. While the textual materials up to the tenth class level will be developed by the School Board under the care of the Boards of Studies for different disciplines, those for the Plus-2 stage will be prepared by the Board of Senior Secondary and Further Education and their Boards of Studies.

11.60. As income from the supply of text books, in the proposed set-up, would remain exclusively with the corporation, it would be just and fair, if it is judiciously shared with the Punjab Education Board, the Board of Senior Secondary and Further Education and the SCERT to ensure an effective pursuit of their respective activities. This would necessitate an amendment in the existing School Board Act and preparing a fresh Act for the Book Corporation, keeping this exigency in view. Fresh legislation will also be necessary for the formation of the Senior Secondary Board with similar provisions. A charter clearly redefining the role and responsibilities of the SCERT will also need to be framed.

SCERT.

11.16. In our view the SCERT should be responsible for the research and development functions of the Department and also for organising in-service education in collaboration with

the proposed State Institute of Educational Studies and Development. After a careful appraisal of the existing set-up, it appears to us that with the exception of the Evaluation and the Survey Units, none of the existing units functionally belongs to the SCERT. Accordingly, the other units could be located more gainfully in other parts of the system. As stated earlier, the units of Educational Technology and of Science Education would, in the proposed set-up, be located advantageously with the State Institute of Educational Studies and Development. The Guidance and Counselling Unit could be integrated with the proposed office of the Additional Director Vocational Education and Counselling.

11.62 The proposed arrangement would necessitate the formation of a Curriculum Construction Unit in this agency. This function requires constant feed-back, which may be conveniently procured by this body. As already stated earlier, the review of syllabii and textual material would also be its function.

11.63 The SCERT may have to establish a unit for research and development by extending the function and scope of the Evaluation Unit. For its experimental research on the evaluation system in practice in the state it has to procure adequate data from the Punjab School Education Board. This linkage has to be reinforced for more effective co-operation and co-ordination.

11.64 Senior Secondary Education, whether in a senior secondary school, a college, an ITI or a Polytechnic etc., is an extremely crucial stage because of its terminal nature for most of the students. To ensure uniform academic, professional and vocational standards at this stage we propose a Board of Senior Secondary and Further Education.

11.65 The proposed Board may consist of a Chairman and the following other members :

(1) Ex-Officio members, namely:—	
(a) Vice Chancellors of the Universities by rotation	3
(b) DGPI and DG Vocational and Further Education	2
(c) Chairman of the Punjab School Education Board	1
(d) Director, TTTI, Director. PIES and DDPI (Colleges)	3
Total :	9

(2) Nominated Members:—

9 persons—2 amongst Principals of colleges of Arts and Science; 2 from Senior Secondary Schools; 4 from Professional Colleges and Vocational Institutes; and one District Education Officer

9

Total : 9

Members referred to in (2) above will be nominated by the State Government for a period of three years, one third relinquishing charge every year.

Organisational structure.

11.66 In addition to the Chairman, there may be a whole-time Secretary to be assisted by three Deputy Secretaries, one each for Examinations, Conduct and Secrecy, Boards of Studies may consist of 8—10 outstanding academic persons, representing the institutions of Higher Learning and the Plus-2 stage, including Polytechnics and I.T.I's for each discipline.

Additional Director Vocational Education and placement.

11.67 Vocational education under the existing arrangement is an integral part of the Directorate of Secondary Education. The placement service, which is an important adjunct of vocational education, under the proposed set-up, will be at the Plus-2 stage, which is expected to be located in Senior Secondary schools, colleges and technical institutes. It is therefore, imperative to have a separate unit for vocational education and placement to cater to the needs of the students as the Plus-2 stage both in schools and colleges. This agency, under the proposed set-up, would assist the DGPI in directing, controlling and guiding the vocational clusters of education to be organised within the school system, namely; Agriculture, Commerce and Home Science at the Senior Secondary level and Work Experience/Socially Useful Production Work up to the end of the 10 years' school cycle.

11.68 Placement service would also be directed and monitored by this agency with adequate support from the field officers. We, therefore, propose an additional Director Vocational Education and Placement who should be a specialist in the job, and should be assisted by Deputies at all levels. The Deputy Director Placement would assist his chief in directing, controlling and monitoring the placement services in respect of the three clusters of vocational courses at the Plus-2 stage. The circle level officers would be expected to assist in monitoring both vocational education and the placement programmes. The district officers would maintain regular rapport with the concerned employers in their respective areas and continue receiving feed-back from them on the actual performance of the products of the plus-2 stage for any homeostatic corrections.

11.69 What passes for vocational education on the side of General Education at present is nothing more than work experience. While work experience/SUPW, forming, as it does, an integral part of general education, both at elementary and secondary levels of education, helps in building healthy attitudes towards manual labour and the development of other personality traits, it is at the senior secondary stage that we propose to prepare the students specifically for the world of work. It is, therefore, of vital importance to provide a strong linkage at this stage between the general and the vocational education in our organisational set-up. Vocational education, under the proposed set-up, would be pursued at the Plus-2 stage both through the general stream of education and through the vocational and technical education set-up. It, therefore, logically follows that both these set-ups must work in unison under one umbrella to ensure continued reinforcement of the bridges of co-operation and co-ordination. Such an arrangement has already been suggested earlier by proposing that the two departments should be brought under the overall control of the same Minister.

11.70 The mounting responsibilities of technical and vocational education and the magnitude of the proposed programme of further education on this side demand not only a strong linkage within the whole system but also a befitting status for the head of this department. We, therefore, propose the provision of a Director General Vocational and Further Education to be assisted by two Directors, one for Vocational Education and Training and the other for Further Education i.e. polytechnics and other specialised institutions and colleges of Further Education. Such an arrangement is expected to raise the decision making capacity of the Directorates concerned. The Director General, as the top, would provide a strong link between vocational and Further Education, ensuring more effective co-ordination and co-operation between the two wings. This will facilitate vertical mobility between Vocational and Further Education, ensuring more effective co-ordination and co-operation between the two wings and the sought-after diversification at this level.

11.71 Headed by the Minister for Education and assisted by the Deputy Minister, Vocational and Further Education, if any, the Committee will comprise 25—30 members, including DG Vocational and Further Education, DGPI (General Education), Additional Director Vocational Education, Director Industries, Director Research and Medical Education, Chairman, Board of Senior Secondary and Further Education, Principal, TTTI, Director Vocational Education and Training, Director Further Education. Heads Polytechnics-2, Head ITI Centres-2, Principal, Engineering College-1, Educationists from Universities-3, Eminent Industrialists-3, Renowned Commercial Organisations-3 and Distinguished Educationists-3 and 3 members of Legislature, representing the public.

Director of
Vocational
Education and
Training

11.72 The Director Vocational Education and Training will be assisted by a Joint Director (Craftsmen) to be further supported by a Deputy Apprenticeship Adviser, an Assistant Apprenticeship Adviser, a Placement Officer and a Statistical Officer. Besides, a Deputy Director (Administration), supported by an Assistant Director, will look after the administrative affairs of the Directorate. Four Assistant Directors, one each, will respectively take care of the purchase of Machinery, Training, Planning and Inspection. Two Assistant Directors will take care of Industrial Schools in the State. To ensure more affective inspection of ITIs/Centres and Special Trade Institutions, we recommend two Assistant Directors in place of the existing arrangement of a Technical Officer.

Director of
Further
Education.

11.73 The Director of Further Education will look after the wing pertaining to Technical Education, taking care of polytechnics and colleges of Further Education in the State. This officer, under the proposed set-up, will be assisted by a Deputy Director, Planning and a Deputy Director, Administration. Besides, an Accounts Officer taking care of the section relating to accounts and loans will also be on the staff of this Directorate.

Non-formal
Education,
Counselling
and
Placement.

11.74 Education is no longer mere preparation for life-it is synonymous with life itself in terms of human resource development. The development of all material resources necessitates an adequate input of a competent human resources. Our formal agencies of vocational and technical education do not seem to cope with our growing needs for skilled craftsmen technicians and their upgradation during their working life. Besides, there is not sufficient scope for continuing education to ensure horizontal or vertical mobility or for updating the fast obsolescing knowledge and skills to match with rising human aspirations. We, therefore, recommend the provision of an Additional Director, Non-Formal Education, Counselling and Placement under the direct control of the Director General, Vocational and Further Education. This officer may be supported by two Assistant Directors, one for Non-formal Education and Counselling and the other for Placement.

11.75 Placement service under the existing arrangements is highly centralised, while counselling for technical education and vocational trades is missing altogether. The proposed officers will monitor activities in their respective fields, and maintain an effective liaison with all vocational institutions and polytechnics. Every institute will have a senior teacher in charge of placement service and another senior teacher, duly trained for the job, to look after counselling and non-formal education. Counselling, it is reasonably believed, will help potential drop-outs to get suitably adjusted in the training programmes in the institutions concerned. Adequate control of drop-outs and stagnation will not only bring down the per capita cost of training, but would also ensure the supply of properly trained craftsmen and technicians

to the world of work. The Local Advisory Committees can be geared into action for more effective participation to ensure stronger linkages between training institutes and the industrial set-ups in the surroundings.

11.76 The Technical Teachers' Training Institute, being an organisation of the Union Government, may collaborate only as a *pro tem measure* with the DG Vocational and Further Education for in-service education of technical teachers and vocational instructors. It also has a cell for curriculum development and preparation of syllabii for vocational trades and technical disciplines, which could be utilised. This institute could collaborate with the concerned board of studies for the production of text-book material for different vocational and technical subjects. Books on the concerned subjects could also be periodically reviewed by this institute. But eventually, the State will need to have its own Institute as a supporting reasearch and development organisation.

Technical
Teachers'
Training
Institute.

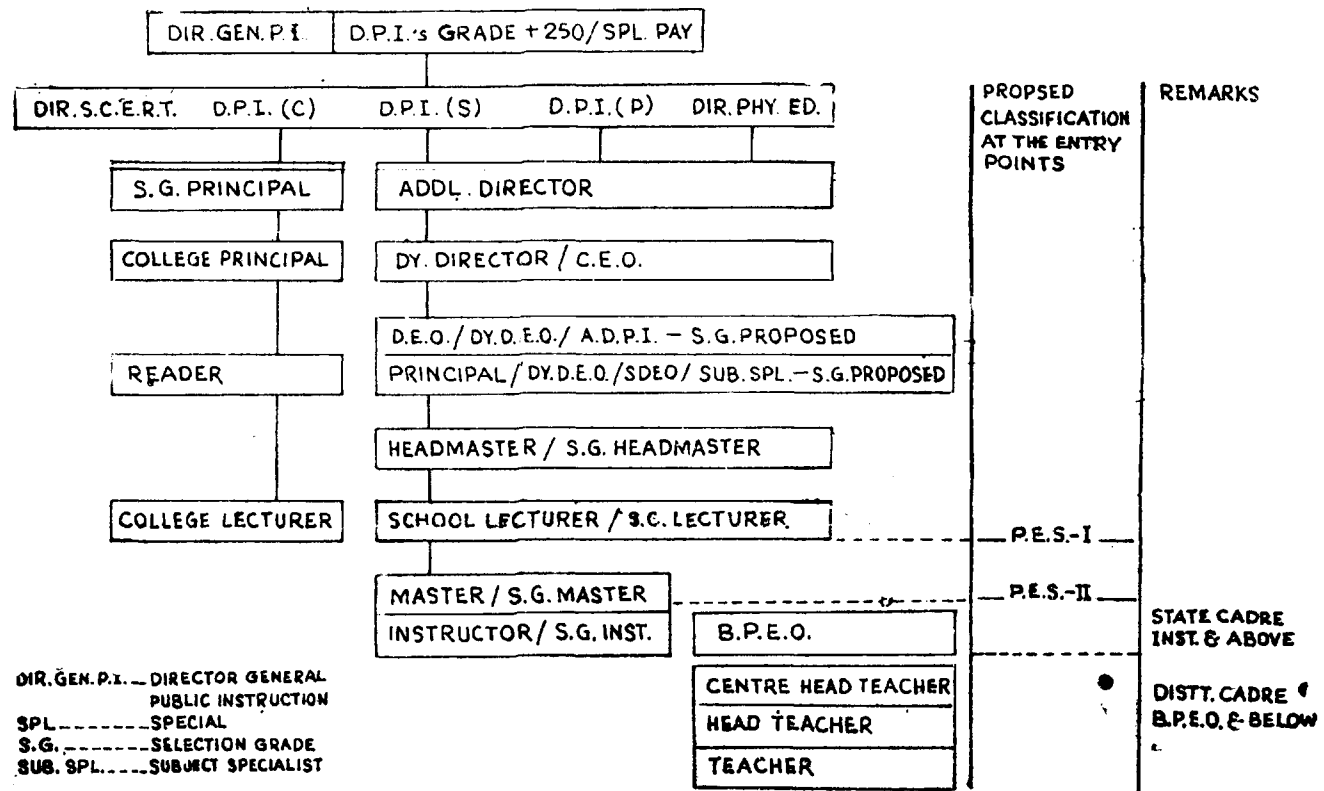
11.77 As General Education would be an important and integral part of vocational and technical education, for vertical and horizontal mobility a senior officer well-versed in general education with specilisation in educational technology may be posted to assist the Director General, Vocational and Further Education in directing, controlling and guiding the general education contents and allied methodologies in collaboration with the Punjab State Institute of Educational Studies and Development for the preparation of software in educational technology. The requirement of supporting staff may be worked out by experts in this field.

Additional
Director
General Edu-
cation and
Educational
Technology.

11.78. As Vocational and Further Education represents the emphasis area of our recommendations and is also likely to be the thrust area of the future educational policy of the Government, the whole structure of the management of education at the Plus-2 and further education level would need review and reappraisal as soon as the system gets established. The set-up being suggested above is a tentative one to get things off the ground and would certainly require in-depth study as soon as we gain some experience of its implementation. The proposed set-up should, therefore, be considered tentative but minimal for commencing the operation.

11.79 Fifty per cent of the vocational institutes, it has been observed, need modernisation of their workshops and laboratories. We recommend a five year perspective plan for modernising the workshops in a phased manner. Meanwhile positive steps need to be taken to decentralise financial and administrative powers. The Principals of these institutions should be authorised to revise the norm for the provision of raw material to the trainees in view of the rising cost of the material. Such norms were fixed centrally in the year 1976, and call for periodical review and revision to ensure an adequate supply of raw material to the trainees.

Modernisation
of Workshops
and Labora-
tories.



Note: While parities at different levels have been proposed alongwith fresh classification of services at different entry points, we have deliberately avoided recommending specific scales which may be effected in the light of recommendations of the National Education Commission and UCC.

DIAGRAM II.3 PROPOSED PARITIES AND RATIONALISATION OF EDUCATION CADRES

11.80 Cadres without the necessary rationale create not only anomalies but also disharmony and a consequent inefficiency. While the excessive security provided by running grades is likely to breed complacency, the creation of too many cadres is conducive to confusion, discord and heart burning. Our proposals for the rationalisation of cadres are largely governed by the rationale of moderation and a middle path. We have endeavoured to provide parity among functionaries in different cadres on the basis of comparable qualifications, professional expertise and the nature of responsibilities attached to the jobs concerned. We have also tried to provide a minimum of two steps of promotion or selection grades to all personnel at all levels during their tenure of service, while extending opportunities for direct selection to persons with distinctive merit at different entry points. Diagram 11.3 on the opposite page presents a compact picture of the proposed parity and rationalisation of cadres. While parities at different levels have been proposed along with a denovo classification of services at different entry points, we have deliberately avoided recommending specific scales which may be effected in the light of the recommendations of the National Commission on Teachers.

Rationalisation
of Cadres.

11.81 There is only one district cadre of teachers at the primary level with three steps of promotion : (1) Head Teacher; (2) Centre Head Teacher; and (3) Block Primary Education Officer. The first 2 steps of promotions up to the level of Centre Head Teacher, on the basis of seniority, seem to be justified. The 3rd step is a supervisory post which may be filled on the basis of selection from amongst the teachers of the district cadre. The essential qualifications for this post should be a B.A./B.Sc. degree with professional training. The requirement of the academic degree may be waived in case of persons possessing mature experience with outstanding performance. A supervisory officer has to be at a higher level of recognised academic and professional achievement. However, to provide an incentive for continued professional interest, the primary teachers, on the successful completion of a ten-year tenure of a post, may be placed in the next higher grade so as to ensure coverage of the first two steps on the basis of seniority within a span of twenty years. Both the promotions will be subject to the condition that their work and conduct remains satisfactory during the stipulated tenure of a post.

Primary Level.

11.82. As already discussed in the preceding chapter, there are three main categories of teachers at the secondary level i.e. (1) Classical and Vernacular teachers, (2) Masters (Trained Graduate Teachers), and (3) Lecturers (Post-Graduate Teachers).

Secondary
Level.

11.83. Classical and Vernacular Teachers, though working in the uniform grade of Rs. 570—1,080 have been further classified into three categories :

(a) Shastris,

(b) Language Teachers,

(c) Drawing Teachers, Arts and Craft Teachers, Physical Education Instructors, Manual Training Instructors and Agriculture Teachers.

11.84. Shastris are given 5 advance increments on their appointment in the scale, whereas language teachers get three advance increments. All other categories of C and V teachers are denied this benefit. Thus Shastris, Language Teachers, and other C and V Teachers get differential start of Rs. 660, Rs. 620 and Rs. 570 respectively. This discrimination is based on the initial qualifications required for recruitment to various categories.

11.85. Shastris and Language Teachers possess an honours certificate in their respective language followed by a year of professional training. They also teach students of the same grades as the masters do. It is, therefore, proposed that these two categories, should be merged with the cadre of masters. They may, however, be considered for next promotion only after they have graduated. It, therefore, logically follows that language teachers should be drawn from both the categories : (1) masters having studied Sanskrit, Hindi or Panjabi as an elective subject at the degree level and (2) Shastris and other language teachers, possessing honours certificate in the language concerned with professional training. Other categories of classical and vernacular teachers may be designated as instructors in their own scale and brought on the State cadre. They may also be encouraged to improve qualifications in their respective fields so as to be on a par with the essential qualifications of a master.

11.86 In the proposed set up, both school and college lecturers will be called upon to do the same type of work with students of the same standard at the Plus-2 stage. It would, therefore, be just and fair to keep them on a par in respect of grades and emoluments. It would be befitting to place them in PES Class I in school and college cadres. School lecturers like other functionaries, on completion of 10 years of service, may be placed in a suitable selection grade. A similar proposal for college lecturers will be made under the "College Level". The essential qualifications for school lecturers in the proposed set-up have been raised to a second class MA/M.Sc./M.Com. with a professional degree or M.Phil. which, under the existing set-up, is not essential. As such, the proposed parity between the school and the college lecturers is quite commensurate with the proposed comparable qualifications and job requirements. This parity, we believe, will not only facilitate the desired free flow of teachers, but will also conduce to qualitative improvement of education at the Plus-2 stage.

11.87 The head of a high school, who has a multi-dimensional role as a leading teacher, supervisor, administrator and public relations officer has evidently heavier and much more challenging responsibilities than those of both the school and the college lecturers. On the same proposed pattern, we recommend a suitable selection grade for this pivotal officer on completion of 10 years of service as head of a high school. Heads of High and Senior Secondary schools may also be given an administrative allowance of Rs. 75 and Rs. 100 respectively to attract talented persons.

11.88. Deputy DEOs/Principals etc. who are now placed in the PES-II in the scale of Rs. 825—1,580 may, in the proposed set-up, be placed above the heads of high schools. The proposed SDEOs may also be in the same scale. This is desirable to ensure a pay scale commensurate with the added responsibilities accompanying the Plus-2 stage. Both heads and school lecturers should be eligible for promotion to these posts on the basis of seniority against seventy-five per cent of the posts. Twenty-five per cent of the posts may be filled by direct selection. We recommend the provision of a selection grade at this level also.

11.89. The District Education Officer, in the proposed organisational set-up, has to be a strong link both horizontally and vertically. He has to coordinate not only both primary and secondary stages of education at the district level, but also to act as a sort of Public Relations Officer *vis-a-vis* other departments. Further, he has to keep an effective liaison both with the Circle as well as the Directorate levels. It is, therefore, proposed that he should be in a scale sufficient to support his status and responsibilities. As the district chief, in the proposed set-up, assumes significant dimensions in his role in respect of both expectations as well as actual performance, we recommend another entry point at this level for direct selection against 25 per cent of the total posts. This would ensure the induction of people with established distinction and merit. To guard against stagnation at this level, we recommend the provision of a selection grade for those incumbents who have successfully completed a ten year tenure in this grade. Deputy CEOs/Assistant D.P.Is may also be given parity with the DEOs in view of the heavy administrative demands on their jobs. Senior and mature persons at this level may be reasonably expected to add to efficiency and quality of work in circle offices as well as in directorates.

11.90. Circle Education Officers/Deputy Directors, to keep the hierarchical balance, may be placed in a befitting scale. On the premise of the same logic and also on the basis of the fact that elevation to the post of Additional Director is normally possible towards the fag end of one's career, it is proposed that this post may carry a scale commensurate with its status and job requirements.

11.91. The existing scale of the DPI (Rs. 2,300—2,500) may, in the proposed set-up, also be suitably raised in keeping with the added responsibilities of the Director and the pay scales of officers of equivalent rank in other departments. The Director General may also be in the scale of DPI's with a special allowance of Rs. 250 per mensem.

11.92. The master (trained graduate) in secondary schools has an important role in the educational process. His status has to be raised, if we expect any spectacular improvement at the secondary stage. Several Commissions on Education have, from time to time, made strong recommendations for raising the master's status in society commensurate with their role as nation builders. Considerable innovations are getting introduced in schools, which call for ever changing dimensions in the role performance of this functionary in particular. It would be pertinent, and also in keeping with our national policy, if his status is raised and his contribution recognised by placing him in PES-II. Feelings of self-regard, genuinely generated by a raise in salary and status would, it is believed, be reflected in their performance.

College Level.

11.93. The existing scale of college lecturers (Rs. 700—1,600) is a running grade for all. In keeping with the proposed general policy of providing two steps of promotion/selection grades, on the basis of tenure, in the total service, we recommend the provision of another entry point as a Reader by promotion for 75 per cent of lecturers, who have successfully completed 10 years of service in the cadre. Twenty-five per cent of the posts may be filled by direct selection for the induction of teachers of outstanding merit. Modalities for recruitment would be mentioned elsewhere in this chapter.

11.94. Seventy-five per cent of the Readers who have successfully completed 15 years of service in the grade may, on the basis of seniority, be given the Principal's grade irrespective of their posting. This would be a safeguard against stagnation in service. Twenty-five per cent posts of College Principals, in the proposed set-up, should be filled by direct selection and the remaining 75 per cent by departmental promotion. This is being proposed to keep up uniformity in the recruitment modalities of all functionaries in different education cadres at all subsequent entry points after the first entry.

11.95. Principals may continue to be on a par with Deputy Directors with perks like rent free accommodation and an administrative allowance of Rs. 100 per month. The selection grade Principals may also be treated at par with Additional Directors.

11.96. As indicated in diagram 11.3 opposite to page 32, we have proposed parity in pay scale and emoluments between school and college cadres at certain levels of functionaries; (1)

School and College lecturers; (2) Principals of Senior Secondary Schools and Readers; (3) College Principals and Deputy Directors, and (4) Additional Directors and Senior Grade College Principals. Such parity of pay scale among officers of different directorates is conducive not only to better coordination but also to a free flow among them, which breaks the isolation. Twenty-five per cent of the promotion posts may continue to be filled through direct selection at the subsequent entry point after the first entry to ensure the induction of personnel on merit. This may be applicable to all cadres.

11.97. To provide an incentive to teachers we propose that all categories of teaching personnel and some educational administrators, specified elsewhere, be given the benefit of a selection grade on successful completion of 10 years of service on a particular post. In the absence of adequate chances of promotion to the next rank, placement in the selection grade is the only suitable incentive for sustained interest. As this measure is simply a safeguard against stagnation, it would be fair to suggest that the ceiling of the proposed selection grade should be lower than that of the scale pertaining to the next higher level in the hierarchy.

11.98 Our recommendations relating to the rationalisation of the education cadre could be precisely summed up on the following lines :

- We have proposed parities between the school and the college cadre functionaries on the logical basis of comparable academic and professional qualifications and maturity of experience and the level of instructional work.
- Specific pay scales have not been proposed, which may be effected in the light of the forthcoming recommendations of the National Commission on Teachers.
- While recommending parities between two separate education cadres, we have genuinely felt that in recognition of the teacher's nation-building responsibilities, his status and salary must not only be commensurate with the job requirements but must also compare favourably with those of other functionaries with comparable qualifications and professional expertise in other departments.
- While objectively viewing the teachers salary to be inadequate as compared to his professional status, and reckoning it as a contributory factor for most of the malpractices, we have felt it to be a genuine case for considerable upgradation of the existing pay scales.

TABLE 11.2: Proposed Recruitment Modalities, Educational Qualifications and Experience for Entry points.

D.G.P.I.	By selection on the basis of seniority-cum-merit. Experience of three years as D.P.I. or its equivalent post.
Director Phy. Edu., D.P.I.(C), D.P.I.(S) and D.P.I. (P)	By selection on the basis of seniority-cum-merit. Experience of five years in PES-I
Additional Director	Ditto
College Cadre—P.E.S.I	
Principals	25% by direct selection and 75% by promotion Qualification as per U.G.C. norms.
Reader	Ditto
School & Inspection Cadre—P.E.S.I.	
Principals Deputy DEO/SDEO, Subject Specialist	25% by direct selection (i) M.A./M.Sc./M.Com. II Division—50% marks (ii) B.T./B.Ed. (iii) Experience of ten years in teaching/inspection including two years in PES-II
Headmaster	40% by direct selection and 60% by promotion—PES-II (i) B.A./B.Sc. II Division—50% marks (ii) B.T./B.Ed. II Division (iii) Eight years of teaching experience as a master or three years as a lecturer—PES-II
Lecturer	(a) College Cadre—PES-II—As per U.G.C. norms. (b) School Cadre—PES-II—100% by direct selection (i) M.A./M.Sc./M.Com II Division—50% marks (ii) B.T./B.Ed. or M.A.—Division or M.A./M.Sc.II Division with M. Phi
Master/SG Master	(i) B.A./B.Sc. II Division-50% Marks (ii) B.T./B.Ed./DPE or equivalent Gazetted
Instructor/SG Instructor	Matric plus professional qualifications—State Cadre
Block Education Officer	B.A./B.Sc. with J.B.T.
Centre Head Teacher/ Head Teacher/Teachers	Matric with J.B.T. —District Cadre

Recruitment modalities, qualifications and experience for entry points.

11.99 Primary teachers totalling over 51,000 constitute about 50 per cent of the total staff strength. In view of their huge number, it would be desirable from the management point of view, if they are allowed to remain in the district cadre. As already proposed in this chapter, BEO's appointment should go by selection and preferably graduate teachers with JBT/ BT/B.Ed qualifications may be considered for reasons stated elsewhere in this chapter. The requirement of an academic degree may be waived in case of persons with mature experience and outstanding performance as teachers. Please refer to Table 11.2 on the proposed modalities in this connection.

11.100 The existing academic qualification for the post of a master is a B.A./B.Sc. Degree with the professional BT/B.Ed. degree. In our opinion the minimum qualifications should be a 2nd division graduation with professional qualifications as already prescribed. This minimum level of 2nd division is expected to raise the qualitative standard of teaching.

11.101 The essential qualification for a school lecturer, under the existing arrangement, is a Master Degree in the subject concerned. Only 2nd divisioners with a minimum of 50 per cent marks, in our opinion, may be considered for a school lecturer's post. BT/B.Ed., which at present is only a preferential qualification, should be a part of essential qualifications, so that they may not be out of tune with other functionaries for whom this professional qualification is compulsory. Even otherwise a degree in teacher education is essential for successful teaching, particularly at School Level. The requirement of the professional degree may, however, be waived in case of first divisioners in MA/M.Sc./M.Com. or second divisioners with M.Phil. in the subject concerned. To ensure quality of education all such posts should be filled by direct selection.

11.102 Headmasters under the existing arrangement, are gazetted but not placed befittingly. We recommend their placement in PES-I, but at a level higher than that of school as well as college lecturers. The present practice of recruitment by direct selection of 25 per cent of the functionaries seems in order. The essential qualifications for direct selection, in our opinion, should be a 2nd class degree both in academic and professional streams, unlike what is required at present. Eight years of teaching experience for double graduates, seven years for post-graduates with B.Ed., and six years for post-graduates with M.Ed., as already prescribed, may continue to attract better qualified persons. Lecturers with 2 years of teaching experience may be considered for appointment by direct selection. This is, however, subject to their possession of the professional qualifications or M.Phil.

11.103 Twenty-five per cent of the posts of Principals/SDEOs/Subject Specialists would be filled by direct selection. Essential qualifications for direct selection would be MA./M.Sc./M.Com., Second Division, with a minimum of fifty per cent marks in the subject concerned. They would also be in possession of a professional degree of M.Phil, with a minimum service of eight years as headmasters or lecturers in schools or colleges (PES-I.) Modality for promotion by seniority has already been suggested elsewhere.

11.104 As already stated earlier, there would be an entry point at the DEOs level to ensure the induction of persons of established merit against 25 per cent of the total number of posts including the equivalent post of Deputy CEO's and ADPI's. Ten years of experience in teaching or administration or inspection with eight years of experience in PES-I is considered adequate for direct selection at this level. Their academic qualifications may also be MA/MSc./MCom., II Division (50 per cent marks), with a professional degree.

11.105 For direct selection against 25 per cent posts of Readers in the proposed set-up, lecturers with ten years's experi-

be considered. University lecturers may also be considered eligible for direct selection for the induction of personnel on merit. Similarly, 25 per cent posts of college Principals may be filled by direct selection for the induction of talented persons.

11.106. The posts of Additional Directors and DPIs are filled by selection on the basis of seniority-cum-merit. We, however, propose a minimum experience of 15 years in PES-I instead of the existing requirement, which would not fit in with the proposed set-up. The minimum experience for the post of DGPI may be three years as DPI or its equivalent post. This may also go by selection on the basis of seniority-cum-merit.

Personal
Secretarial
Staff for
Directorate
and Field
Offices.

11.107. It is an established fact that the efficiency of and Head of Office or Department depends to a great extent on the personnel or secretarial staff who are entrusted with multifarious duties like liaison with other offices and institutions and keeping a diary and follow-up of all correspondence addressed by name to the Head. They have also to take care of secret and confidential notes and communications necessitating personal attention at all levels of processing. Besides, taking notes in shorted with reasonable speed and accuracy is of utmost importance for quick disposal. With increasing expansion of education at all levels the secretarial work in the field as well as the Directorate of Education has increased manifold. In the light of this factual position, it looks arbitrary to stick to the age old convention of providing Personal Assistants and Private Secretaries only at the Secretariat level. This privilege, in all fairness, should be extended to the Directorates as well as the field offices. The standing decision against the provision of such posts in offices other than the secretariat may be waived of in favour of the latter to ensure efficiency, accuracy and promptness at all levels. Specifically, we recommend the provision of posts of Private Secretaries with the Director General, Public Instruction and Director General Vocational and Further Education and Personal Assistants with the Directors of Public Instruction to ensure quality with speed.

11.108. Under the existing arrangement only the secretarial staff have been denied the benefit of selection grade while this privilege is being extended to the other ministerial staff of comparable status in the secretariat. It is, therefore, recommended that this type of staff may also be extended the benefit of selection grades on the pattern already existing in the Secretariat. Due incentive may be provided for giving a higher start in the prescribed grade to personal/secretarial staff depending upon their academic qualifications either at the time

of entry into service or as soon as they attain higher academic qualifications.

11.109. The existing disparity between the ministerial staff working in the Secretariat and those working in the Education Directorates in respect of promotional avenues and procedure of selection grades at different levels does not appear to be based on any convincing rationale. The redefined role of responsibilities of the DGPI as an Additional Secretary, in the proposed set up, further necessitated elimination of the differential treatment meted out to the ministerial staff of the Education Directorates, which, in the proposed set-up, would function as a single organic unit under the DGPI as a coordinating link. The modalities and avenues of promotions, including the selection grades identical. This parity we believe, would be conducive to functional efficiency on all levels and would, incidentally, restore the directorate to its original status which it enjoyed prior to 1957, when DPI was *ex officio* Education Secretary.

Ministerial
Staff at
the Direc-
torates of
Education.

11.110. In spite of the continuing expansion of education, particularly at the primary and secondary levels, our policy and procedure for the recruitment of teaching personnel has been far from satisfactory. The Subordinate Services Selection Board and the Punjab Public Service Commission have been so overloaded that they have not been able to give due attention or weight to the recruitment of teaching personnel or educational administrators for the education department. This is evident from the fact that no regular recruitment has been effected in respect of any teaching post in the government schools since the year 1977-78. Only the services of ad hoc employees are being regularised and adhocism tends to create indifference and laxity among the employees. Besides this, adhocism in recruitment leads to all types of malpractices.

State
Education
Services
Commission.

11.111. Further, the practice of recruitment in bulk at a times does not only unnecessarily raise the pupil-teacher ratio temporarily, but also creates avoidable staff insufficiency caused by simultaneous bulk retirement at one time. Such a recruitment policy creates stresses and strains in the system.

11.112. A rhythmic recruitment policy will logically lead to the normal incidence of retirement, evenly spread over a reasonable span of time. Recruitment in regular routine causes fewer problems and thus ensures a more judicious screening of the candidates for the teaching jobs.

11.113. In view of this factual position, it would be pertinent to have a separate statutory body which may be named the Education Service Commission for recruitment of all categories of educational administrators and teachers both at primary and secondary level, including, of course, the Plus-2 stage. We recommend that such a statutory body for the educational service in the State may be constituted.

Table 11.3 : Annual Rate of Required number of Teachers

Stage	Number of Teachers		Number of Teachers required Annually
	1982-83	2001-02	
Primary	51,734	83,948	1,695
Middle	29,979	47,819	939
High	19,043	51,906	1,729
Total ..	1,00,755		4,363
Attrition Rate 1.5%	Number of teachers retiring annually		1,511
	Grand Total :		5,874

11.14. Table 11.3 given above shows the number of teachers at Primary, Middle and High levels separately on the basis of statistics for the year 1982-83. Their total strength is 1,00,756. Reckoning this as the base year, the number of teachers required after 20 years, i.e., in 2001-02, has also been worked out. The average number of teachers annually required is also given in the table. The total works out to be 4,363. The annual attrition rate being 1.5 per cent, the average number of teachers retiring in a year comes to 1,511. Thus the total annual requirement of over 5,000 teaching personnel is obviously a whole-time job for any recruiting agency whatsoever.

11.15. The proposed State Education Services Commission may consist of a Chairman, supported by four members. The Chairman may be an eminent educationist with a rich background of varied experience in the field of education. Two of the four members may be renowned educationists, while the remaining two may represent fields other than education such as Science, Industry and other professions.

SUMMARY OF

CHAPTER XI : PROPOSED CHANGES IN EDUCATIONAL ADMINISTRATION

1. The existing administrative set-up for the management and control of education in the State is based on the recommendations made by Shri J. D. Sharma in the year 1962. The system since then has grown because of the increased demand for education from the community and awareness of the need for developing human resources for the socio-economic progress of society. Expansion in education brought in its wake bifurcation of the composite directorate in the year 1976 into Directorate of Schools and Directorate of Colleges. Two years later, the Directorate of Schools was further split into the Directorate of School Education and the Directorate of Primary Education. While the trifurcation was ostensibly based upon administrative convenience, it evidently resulted in loss of academic leadership and generated barriers of isolation. Whatever was gained in terms of administrative convenience was lost in terms of academic cohesion and continuity at different levels of education. At the top level of policy formulation also the Department of Education works in a state of virtual isolation from other departments concerned with the development of man power resources. Vocationalisation of education at the Plus 2 stage would necessitate close cooperation and coordination not only among the different directorates within the framework of general education but also between the organisational set-up of the two intrinsically inseparable streams of the general and the vocational education for the development of our human resources. The situation demands a permanent mechanism for inter-departmental and intra-departmental interaction right from the governmental level down to the school complex level for a successful educational service of the community. (11.01—11.06)

2. There is no linkage, at present, between general education and vocational education, which is unsound for an effective man power development. We, therefore, propose that the department of Education and the department of Technical education and Industrial Training be brought together under the same Minister and that a State Council for General and Vocational Education and Training be set up in the State to serve as an apex body and provide a suitable mechanism of interaction between the two streams. This body will be headed by the Chief Minister, advised by the Minister of Education and Vocational Training and assisted by the Secretary, Education and Vocational Training, who will co-ordinate the working of the two departments and be incharge of both. The other members of this body will represent different

State Council
of General
and Vocation-
al Education
and Training.

directorates of education, the universities, health services, the Punjab and Delhi Chamber of Commerce and Industry, SCERT, and Boards of Education. The proposed composition of this Council is given in para 11.8. It is to be supported by two Advisory Committees—one for General Education and the other for Vocational and Further Education. (11.07—11.10)

Education
Secretary.

3. To ensure uninterrupted coordination and supervision in educational administration and academic leadership, professionally, it is not only relevant but also essential to have an eminent educationist as Education Secretary. This is warranted all the more for the reason that education is becoming more and more professionalised.

(11.11)

Director
General
Public
Instruction.

4. Under the existing arrangement the Directorates of Education function as separate entities in a state of virtual isolation. This compartmentalisation furnishes little scope for an effective continuity of educational experiences through the successive stages or for professional leadership in education as a whole. This situation needs an intrinsic link for monitoring and evaluation and for uninterrupted pursuit of improvement in the process of education. Creation of the post of Director General Public Instruction would provide a coordinating link for the directorates, which must function as a single organic unit. For similar reasons the post of Director General Vocational and Further Education also needs to be created. Their ex-officio positions as additional secretaries would be helpful to the Secretary Education in handling the added work load and responsibilities which would evidently be generated as a result of linkages to be set up between the departments of general education and technical and vocational education.

(11.12—11.15)

Administra-
tion at
Directorate
Level.

5. The bifurcation of the erstwhile directorate has resulted in anomalies and overlapping of financial and administrative functions. The proposed DGPI as head of the Department, while acting as a coordinating link, should be able to get over these anomalies by delegating full financial powers to the concerned DPIs and other officers of an equivalent status to ensure efficient functioning in their respective spheres.

(11.16)

Directorates
of Colleges
and Second-
ary Educa-
tion.

6. The College Directorate, we envisage, will not require an organisational change in the near future. In the school directorate, however, the existing managerial set-up will have to be strengthened due to vocationalisation at the Plus 2 stage. One Additional Director Administration and Planning for this stage, if provided, would share some of the added responsibilities of the DPI Schools as well as those of the DGPI.

(11.17)

Directorate
of Primary
Education.

7. For a share focus on the rehabilitation of drop-outs in the age group 14—24 and in view of universalisation of education at this stage an additional post of Assistant DPI be creat-

ed to cope with the increased work load as also for monitoring and directing the functioning of non-formal education centres.

(11.19)

8. Since non-formal education is expected to assume special role in the future, it will have to be developed as a sub-system, for which purpose a separate additional director will need to be appointed to assist the DGPI directly.

(11.20)

9. The existing two education circles have jurisdiction over six districts each. Their reorganisation into three circles will not only make them co-terminous within the revenue divisions but also reduce the number of districts to four in a circle. This arrangement could be conducive to qualitative improvement in educational management. Each circle will be put under the charge of the Circle Education Officer, who will be responsible for education at all stages up to Senior Secondary level. In addition it is proposed to have five Deputy Circle Education Officers, one each for Primary Education, Secondary Education, Non-formal Education and Counselling, Vocational Education and Placement, and Physical Education. The proposed organisation on the basis of specific roles could be helpful to streamline educational administration

Field
Organisation
Circle Level.

(11.21-11.22)

10. The district level under the existing arrangement does not provide any linkage between the secondary and the primary levels of education. It does not, therefore admit of efficient functioning of school complexes which presupposes collaboration of high/higher secondary schools with primary and middle schools for purposes of academic interaction. This will make it necessary for all educational units pertaining to both primary and secondary levels to function under the District Education Officers in the proposed set up.

District
Level.

(11.23-11.24)

11. For facilitating administration and strengthening academic supervision it is proposed to create additional posts of sub-divisional education officers, who will look after the secondary schools and would be directly responsible to the District Education Officers. The SDEO's will be assisted by a senior coordinator planning and supervision and one coordinator each for secondary education, physical education, and non-formal education and counselling. The management of primary education will continue to be handled by the BEO directly with the district chief.

Sub-Divi-
sional level.

(11.25)

12. To assess the need for resources and to make periodical examination of the issue of drop-outs and evaluation of both positively and negatively skewed schools, there should be a District Education Advisory Committee in each district to be headed by the DEO. It will form part of the effort to involve the community in educational management. The composition of the committee is given in paras.

District
Education
Advisory
Committee.

11.27-11.28)

Inspection
and its
norms.

13. The well known objective of inspection, namely, guidance in the process of educational innovation and improvement, does not appear to have been pursued effectively because of the huge expansion of education and lack of follow-up. Every school, irrespective of its stage and standard, should be visited twice and inspected once a year in actual practice. The SDEO's, in the proposed set-up, would share most of the DEO's academic, supervisory, and administrative functions and other related activities. This arrangement would provide much needed relief to the DEO's, who may focus their attention on the Plus 2 stage for inspection. The SDEO's would look after the high and middle schools while the BPEO's would take care of primary schools. (11.29—11.30)

14 To ensure a more thorough and objective assessment all inspecting officers should associate with themselves panels of teaching personnel, representing different levels, derived from the neighbouring schools. They may also associate subject specialists who are being provided under the proposed set-up at the district level. (11.31—11.33)

15. There is sufficient scope for more effective monitoring and follow-up in respect of inspection work for reasons stated elsewhere in this chapter. CEO's DEO's would, therefore, do well to inspect or visit representative samples of schools covering all categories. The CEO, with the help of supporting staff, may effectively inspect 1 per cent of senior secondary, high and middle schools and 5—7 randomly selected primary schools in a year. Similarly, the DEO, in addition to his main charge of senior secondary schools, may randomly select 10—15 schools covering all categories for inspection. The total number of schools for annual inspection for a DEO may range between 35 and 40 including an average of 20—25 senior secondary schools in a District. A detailed *pro forma* for the inspection of a school will have to be developed, making provision for including innovative activities among components for appraisal, and the incorporation of comments on the action points indicated in the preceding inspection reports, in addition to the general guidelines. This *pro forma* should be specially designed and brought up to date by the proposed Institute of Educational Studies and Development. (11.35)

School
Complex.

16. The School Complex, as visualised would be an effective and economical centre for pooling and sharing both human and material resources for the management of education at the grass-root level. A judicious sharing of academic experience and material resources is expected to reinforce the mutual cohesion of the constituents, as also the teaching, learning strategy.

The complex level PTA's representing every constituent of the complex can function as a sort of Advisory Body for providing effective support to the system. The DEO may also

hold bi-annual meetings of all SDEO's in the district for an effective monitoring of academic activities at the complex level and utilise the feed-back thus obtained for furthering the educational programme. (11.36—11.39)

17. Learning Resource Centres to be set up in the senior secondary schools in the first instance, could be effectively utilised for the in-service education of teachers with the support of educational technology and counselling services. (11.40)

Learning
Resource
Centres.

18. Both pre-service and in-service teacher education under the existing arrangements are fragile and fragmentary. There is a need, therefore, for an autonomous pacesetting institution for providing academic leadership in the area with a view to supplying the missing continuity and cohesion between the under-graduate and the post-graduate teacher education both at pre-service and in-service levels. The Units of Educational Technology, Science Education and Evaluation which, at present, are parts of SCERT, will, under the proposed set-up, be integral parts of the Institute of Educational Studies and Development. It will have its own Boards of Educational Studies pertaining to different disciplines and media technology. (11.41-11.42)

Institution
of Education-
al Studies
and Develop-
ment.

19. With a view to eliminating redundance and ensuring productive pursuits in the field of physical education there is no need to continuing with the existing five agencies for this purpose. Instead, only agencies, namely, Directorate of Physical Education, Punjab Panchayat Raj Khed Parishad, and Punjab State Sports Council should suffice to look after the sports activities of students and non-students youths. A separate Deputy Director Physical Education may be attached to the Director General Vocational and Further Education for organising and coordinating sports activities on that side. (11.44-11.48)

20. In addition to placing non-formal education and counselling under the charge of an additional director, as referred to earlier, an advisory body representing the non-formal and formal education and other concerned interests be set up for assisting him. (11.49—11.51)

Non-formal
Education
and
Counselling.

21. The existing functions of the Punjab School Education Board overlap with those of the SCERT as well as the Department of Education in respect of running Adarsh Schools, awarding scholarships, research work and field programmes. This results in redundance and dissipation of efforts. The Board would, therefore, do well to concentrate on examinations, preparation of syllabi and development of textual material to avoid overlapping with SCERT and the Department. Field programmes like running model schools and awarding scholarships should fall within the purview of the Education Department. For qualitative improvement of evaluation we recommend separate statutory boards of studies

Punjab
School
Education
Board and
SCERT.

for different disciplines. Curriculum construction, review of the textual material and educational research genuinely belong to the SCIRT to ensure an objective feed-back from the field for a more effective monitoring of educational programmes. (11.52-11.55)

The Text-book Corporation.

22. As publication, supply and sale of text-books involve professional and commercial expertise, it would be worthwhile to assign this task to a separate Text-book Corporation. Mixing up of academic and commercial roles tends to scamp academic work. Income from the supply of text books be judiciously shared with the Punjab School Education Board, the Board of Senior Secondary and Further Education and SCERT to ensure an effective pursuit of their respective activities. (11.56-11.60)

Board of Senior Secondary and further education.

23. There should be a Board of Senior Secondary and Further Education to ensure uniform academic, professional and vocational standards at the Plus 2 stage. The proposed Board may consist of a Chairman, nine ex-officio members and an equal number of nominated members. One third of the total number of members of the Board will be relinquishing every year to ensure continuity. There may be a whole-time Secretary to be assisted by three Deputy Secretaries, one each for Examinations, Conduct and Secrecy. Boards of Studies may consist of 8-10 outstanding academic persons, representing the institutions of higher learning and the Plus 2 stage including polytechnics and ITIs, for each discipline. (11.64-11.66)

Vocational education and placement.

24. The Vocational clusters at the Plus 2 stage, for their successful functioning, would be seeking academic and organisational guidance from experts in the concerned fields. We would, therefore, propose an Additional Director, Vocational Education and Placement, to assist the DGPI in directing and controlling the vocational clusters at the Plus 2 stage and Work Experience/SUPW at the lower level. Placement service would also be directed and monitored by this office with adequate support from the field officers. (11.67-11.68)

Director General vocational and further education.

25. The mounting responsibilities of technical and vocational education and the magnitude of the proposed programme of further education demand not only a strong linkage within the whole system but also a befitting status for the head of the department of technical education and vocational training. We, therefore, propose the provision of a Director General, Vocational and Further Education, to be assisted by two Directors, one for Vocational Education and Training and the other for Further Education, with adequate supporting staff. Further education is going to become more important in the shape of thin things to come. (11.70)

Non-formal system for Vocational Education.

26. As formal education does not seem to cope with our growing needs for skilled craftsmen and technicians, we need the non-formal system for vocational education also. There should, formal system for vocational education also. There

cation, Counselling and Placement. He would take care of not only non-formal education but also counselling and placement services on the vocational side. (11.74)

27. The Technical Teachers Training Institute may collaborate, only as a protemp measure, with the Director General, Vocational and Further Education for the in-service education of technical teacher and vocational instructors. Eventually, however, the state will need to have its own Institute as a supporting research and development organisation. (11.76)

28. Components of general education on the vocational and technical side also need the support of educational technology as well as of general education. We, therefore, recommend an Additional Director, General Education and Educational Technology. This officer should be adequately trained in general education with specialisation in educational technology. (11.77)

29. 50 per cent of the vocational institutes need modernisation of their workshops and laboratories. There should be a five year prospective plan for modernising the workshops in a phased manner. (11.79)

30. While recommending rationalisation of cadres, our main focus is on providing parity between functionaries working in both school and college cadres on the basis of comparable qualifications, professional expertise and the nature of responsibilities attached to the jobs. While extending opportunities for direct selection to persons with distinct merit at different entry points, we have tried to provide two steps of promotion/selection grades for all categories of teaching personnel during the full tenure of service. (11.80)

3.1 The first two steps of promotion for primary school teachers up to the level of Central Head Teacher may be on the basis of seniority. The third step, being a supervisory post, should be filled on the basis of selection from among the teachers of the district cadre. The essential qualifications for this post should be a B.A./B.Sc. degree with professional training. The requirement of the academic degree may be waived in case of persons possessing mature experience with outstanding performance.

32. Shastris and Language Teachers known as Classical and Vernacular Teachers should be merged with the cadre of masters working in secondary schools. Other categories of classical and vernacular teachers like Drawing Teachers, Art and Craft Teachers, Physical Education Instructors, and Agriculture teachers may be named as Instructors and retained in the original cadre.

33. The Master (Trained Graduate) in secondary schools has an important role to play in the educational process as the

future nation builder. His status should, therefore, be adequately raised if we expect any spectacular improvement at the secondary level. This has been suggested by all Committees and Commissions on the subject but nothing has been done with regard to it so far. We propose that he should be placed in PES-II. We feel genuinely convinced that in due course of time, this raise in his salary and status would be reflected in his performance. (11.92)

34. In the proposed set-up both school and college lecturers will be called upon to do the same type of work with students of the same standard at the Plus 2 stage. They should, therefore, be on a par in respect of grades and emoluments. It would be befitting to place them in PES Class I on school and college cadres alike.

35. The Head of a school, who has a multi-dimensional role, should be placed in a pay scale higher than those of the school and college lecturers. Heads of High and Senior Secondary Schools may also be given an administrative allowance of Rs. 75 and Rs. 100 respectively. (11.86-11.87)

36. Deputy DEOs, Principals, SDEOs and Subject specialists in the proposed set-up should be placed above the heads of high schools. (11.88)

37. The DEO has to be a strong link both horizontally and vertically, and would have huge responsibilities to shoulder in the proposed set-up. He should be in a scale sufficient to support his status and responsibilities. We recommend that he be a class I officer to enable him to fill his role adequately. (11.89)

38. The existing scale of Circle Education Officers/ Deputy Directors, Additional Director, DPI (Primary and Secondary Schools and Director, SCRET may be suitably raised in keeping with the added responsibilities. The Director General may also be in the scale of the DPI with a special allowance of Rs. 250 per month. (11.90-11.91)

39. As the existing scale of college lecturers is a running grade for all, we recommend the provision of another entry point as a Reader by promotion, for 75 per cent of lecturers. (11.93)

40. 75 percent of the Readers having successfully completed 25 years of service in the grade may, on the basis of seniority, be given the Principal's grade irrespective of their posting. The college Principals should also be given an administrative allowance of Rs. 100 per month and the Selection Grade Principals be treated on a par with an Additional Director. (11.94-11.95)

41. We have proposed parity in pay scale and emoluments between school and college cadres at certain levels of

functionaries: (1) School and Colleges Lecturers; (2) Principals of Senior Secondary Schools and Readers; (3) College Principals and Deputy Directors; and (4) Additional Directors and Senior Grade College Principals. Such parity is expected to be conducive to better coordination and also a free flow among them, which is expected, to break the existing isolation. (11.96)

42. We have recommended the provision of a selection grade up to the level of DEO in the school cadre and college principal on the college side. This benefit is extended to all functionaries who successfully complete a tenure of ten years of service on a particular post. 75 per cent of the posts at all entry points subsequent to the first entry may be filled by promotion and 25 per cent by direct selection. Table 11.2 may be referred to for recruitment modalities, educational qualifications and experience for all entry points. (Table 11.2)

43. The privilege of providing Personal Assistants and Private Secretaries at the Secretariat level should be extended to the directorates as well as the field offices. (11.107)

44. To ensure functional efficiency at all levels the modalities and avenues of promotion including the selection grade relating to the ministerial staff, whether working in the education directorate or in the Secretariat, must, in all fairness be identical. (11.107-11.109)

45. Our policy and procedure for the recruitment of teaching personnel have been far from satisfactory. This is evident because no regular recruitment has been effected since 1977-78. Only ad hoc employees are being regularised. The recruitment of about 5000 teachers is made annually, which is a whole-time job for any agency. We, therefore, propose a separate State Education Service Commission for the recruitment of teaching personnel and educational administrators. The Commission may consist of a Chairman supported by four members. The Chairman may be an eminent educationist. Two of the four members may be renowned educationists, while the remaining two may represent fields other than education. (11.111—11.115)

CHAPTER XII

SUPPORT SYSTEMS IN EDUCATION

Non-formal
system.

12.01 We strongly favour the development of an efficient system of non-formal education, which could be complementary to the form system. The need to have non-formal education has emerged out of the present demands of the community and the limitations of the formal system. The problems of drop-outs of and stagnation are on the increase. Those who drop out of the system at an early stage, lapse back into illiteracy. Further, there are demands for higher qualifications for a larger number of people due to the sophistication our economy and greater use of high technology.

12.02 The formal system, being time-bound, does not allow entry to the drop-outs at any stage of their life. It is essentially a single entry programme. Once a child leaves the system, he misses the opportunity of education for all time. Besides, the system is costly, hierarchical in character and is heavily loaded with academic disciplines.

12.03 An an alternative strategy, therefore, it is legitimate to introduce the non-formal system of education side by side for drop-outs at various levels, and for those who, for one reason or the other, were deprived of schooling at the initial stage of their life. Unlike the formal system, the constraints of time, age and entry level are not dominant factors in the non-formal system.

12.04 The problem of further education is not limited to the drop-outs of the formal system, but extends beyond, to those who are settled in jobs and are desirous of a change or wish to achieve greater progress in their chosen fields. Besides, a vast majority of the community is eager to cope with the accelerating changes in the physical, social and economic conditions of society. The formal system alone cannot benefit this vast majority because of its constraints of structure and content.

12.05 The non-formal system, thus, includes education of the drop-outs, adult literacy, functional literacy and continuing education for all, from different walks of life. The need to develop a strong base of non-formal education in Punjab is all the more pressing as this state happens to be one of the affluent and progressive states and there is, therefore, greater demand for educational opportunities by its people. Unfortunately, its literacy rate is in no way better, as would be expected, than what it is in other states. In fact, due to early employment opportunities of the youth in small scale

industries and agriculture, education has suffered and shown a downward trend during the years. Whereas, earlier Punjab occupied the 4th place in the country in literacy percentage, now it has gone down to the 17th place amongst the States and Union Territories despite an upward trend from 33.67 per cent in 1971 to 40.9 per cent in 1981. The literacy percentage among men and women is 47.16 and 33.69, respectively. Out of a total population of 167.9 lacs in Punjab, according to the 1981 census, there are roughly 99 lacs illiterates, of whom about 34.37 lacs are in the age-group 15—35 years.

12.06 The target groups that need to be covered under the non-formal system include the following:—

- (a) Infants and children below the age of 6 years for whom educational facilities cannot be created within the formal system;
- (b) Children in the age group 6—11 and 11—14 years who dropped out of the system;
- (c) target group above 15 years of age who are unemployed or employed and are in need of further education;
- (d) 15—35 age group of illiterates which needs to be covered under literacy programmes; and
- (e) continuing education for all.

12.07 The infants and children in the pre-school age group constitute an important segment of our population and an appropriate target group, as is evident from the current researches on child development, which point to the need for early stimulation programmes so that their cognitive development in subsequent years be accelerated. This group is not being covered through any programme of education or even stimulation because of the non-availability of sufficient pre-school education facilities and with many of the homes having little stimulating environments.

12.08 We hopefully believe that integrated child development programmes will catch up in Punjab and that appropriate programmes will be developed for this age group. Educational technology, too, can be put upto effective use for their education and stimulation. It would appear to us that these programmes need augmentation and more attention to be paid to the child welfare as well as pre-primary education. It would be desirable to leave it to the welfare organisations at the present stage, such as the Social Welfare Department and other voluntary agencies. They should, however, being supported education and stimulation. It would appear to us that these financially to a much great extent than at present.

Children in
the age
group 6—11
years.

12.09. Point 16 of the new 20-point socio-economic development programme emphasises compulsory elementary education in the age group 6—14 years. Although the enrolment ratio in the age group 6—11 years is 100 per cent approximately, yet a sizeable number of children drop out, mostly due to non-academic causes. We strongly feel that the drop-outs in this age group should be covered through non-formal education programmes and be given educational content to make up for the deficiency resulting from non-attendance or dropping out of the system and with intentions of bringing them back to the formal system and retaining them till the completion of their elementary education.

Children in
the age
group 11—14
years.

12.10 The drop-out rate of this stage is quite high. For a large number of children in this age group education virtually becomes terminal, after which they join the work force. It would be worth while providing education through the non-formal system to the drop-outs of this age group, to bring them back to the formal system to complete their elementary education.

12.11 These two age-grounds, i.e., 6—11 and 11—14 years, which we wish to restore to the formal system, can be given education in schools in their own time, perhaps in the evenings after regular school hours. The success of these endeavours will depend upon judiciously developed and systematically supervised programme, which work can be entrusted to the heads of the school complexes.

12.12 We are of the view that, with the help of the community through PTA's the drop outs as well as adults can take advantage of the opportunities for education available in the school complexes at their own convenience and place, if the new methods and technologies of education are brought into effective use with some additional teachers inputs on a part-time basis.

The open
School
system.

12.13 For the age group 15 and above the open school can provide an alternative channel, which would supplement the formal system. Through the open school the drop-outs, left-outs and push-outs, girls and women and adults from economically deprived classes can be imparted general education and education relevant to their needs. Open schools provide us with a mechanism for continuing life-long education. This system is capable of imparting education through the non-formal channel to varied target groups, since it is flexible and innovative, and can make use of educational technology. It is undoubtedly a channel for part-time and own-time education with the help of specially designed learning materials. The concept of distance education, thus, can also be effectively put into operation for secondary and higher secondary levels of education on a much wider scale, whereby the adolescents and the adults alike can be provided the opportunity for learning and pursuing further education through the multi-media programme. This channel could also cover

employees of the Defence Services, Border Security Force, Police and other departments, who cannot join regular school and wish to improve their educational qualifications at their own time.

12.14 The success of the open system would depend on proper counselling of the students before and after enrolment, preparation and production of high quality course material, use of educational technology and different media including print, radio, cassettes, and eventually T.V. and provision of study centres and resource centres at the level of learning resource centres for face to face contacts, if needed, for a two-way communication between the tutor and the student. The courses will be learner centred, where the emphasis will be on learning rather than teaching.

12.15 In the life of our nation a stage has been reached when the dictum about education as a "life-long process for all" should be realised and attempts made to put it into practice. The open learning system, thus, can meet the educational needs of the working force in the age group 15 years and about as well as of those who cannot avail themselves of the facilities of regular schooling. It can be utilised for improving the vocational competencies and skills of the work force in diverse areas. It would, however, need through planning and preparation before the project can be launched. The proposed Institute of Educational Studies and Development will have its focus on teacher education in its totality. Open school system, if set up at the Institute, would provide a much needed opportunity to experiment with non-formal and continuing education. The Institute would be an ideal setting, with various departments such as educational technology, guidance and counselling and adult and continuing education, for effectively running the open school system. We strongly recommend that one open school be provided in the state to give a fair deal to non-formal and continuing education strategies.

12.16 Thus far we have considered the target groups which need to be restored to the formal system, or are in need of further education. We now turn to adult illiterates in the age group 15—35 years, who constitute a sizeable chunk of our population and happen to be a priority group in as-much-as they require to be covered under literacy programmes to make them more productive and, therefore, less prone to frustration.

12.17 The various schemes that were looking after adult education for the age group 15—35 years or are engaged in this task presently are given below:—

- (i) Farmers' Functional Literacy Project;
- (ii) Social Education; and
- (iii) Non-Formal Education (Age group 15—35),

12.18 No Farmers' Functional Literacy Project was a centrally sponsored scheme initiated in 1967-68 for functional literacy plus some sort of agricultural orientation to farmers. The programme provided will roganised 9-10 months' courses to the illiterate farmers within the age group 15—35 years. With the adoption of the National Adult Education Policy in 1978 many other schemes were launched and the Farmers' Functional Literacy Project was merged with the Rural Functional Literacy Project.

12.19 By the year 1980-81, the Social Education Scheme in Punjab had made commendable progress. The scheme is in operation in ten districts of Punjab with 290 approved centres for education 290 x 60, i.e., 17400 adults annually. The courses are run for two hours daily for ten months. This programme, in addition to lilteracy, places stress on health hygiene and recreational activity, improvement of economic conditions, civic education and training in citizenship. The scheme is state sponsored and financed by the State in its entirety. It was started in 1953 and reorganised in 1967-68. The Director of Public Instruction (Schools) is in over-all charge of the scheme.

12.20 The two schemes viz., (i) Non-Formal Education (Age group 15—25) and (ii) Farmers' Functional Literacy Programme (Age group 15—35) were merged together in the year 1980-81 under the direction of Government of India and renamed' Rural Functional Literacy Project Schemes (Age group 15—35). It is sponsored by the centre and is jointly undertaken by the Ministries of Agriculture, Information and Broadcasting, Education and Social Welfare, and Health and Family Welfare. Three hundred centres were to be opened in each district, where the farmers' functional literacy scheme was functioning and 100 centres where there was the non-formal education scheme for the age group 15—35. The main object of this scheme was to make the illiterate rural adults literate, to enlighten them in the fields of agriculture and family planning and to uplift them socially, economically and educationally. At present 2632 centres are functioning in Punjab which, we believe, would increase to 3300 centres. More than 80 per cent centres are meant for women and are, by and large, situated in rural areas. Each centre is expected to accommodate thirty learners.

12.21 The Rural Functional Literacy Project was introduced in the Punjrb State in 1981, but the required administrative structure has not been provided to it till today. It is, therefore, not fully operative in the state as yet.

12.22 Besides, Nehru Yuvak Kendras, established by the Ministry of Youth Affairs and Sports for the Welfare of rural youth, are also engaged in the task of spreading literacy in rural areas. These Kendras cater for vocational training to rural youths and organise games, sports and cultural activities for their welfare,

12.23 The universities and colleges are also engaged through N.S.S., and Continuing Education Centres, in the task of liberating the youths in the age group 15—35 years from the bondage of illiteracy. This age-group is of vital importance in changing the complexion of society economically, socially and culturally and, therefore, needs concerted efforts and systematic planning to raise their educational level and enhance their vocation efficiency.

12.24 In addition to the strategies employed in the on-going programmes for adult education there appears to be a need for diversifying our approaches to cover the huge numbers involve in these adult literacy programmes. For instance, the services of unemployed educated youth registered with Employment Exchanges can profitably be utilised for adult literacy, for which purpose they may be paid unemployment allowance. Likewise, interested teachers from the school system can also be called upon to run adult education centres. Students from colleges and universities could also undertake literacy work under the N.S.S. programmes which if organised systematically would ensure continuity to the programmes of adult literacy.

New thrusts.

12.25 In all these schemes of Adult Literacy, while developing the learning materials, it will be necessary to keep in mind the psychology of adults, their needs, and the availability of resources in their neighbourhood. The workers from industries and agriculture can be motivated, only if meaningful learning experiences are given to them, which are related to their work and which are satisfying to them. To make these programmes more attractive and acceptable to adults it is necessary to tie them with functional literacy. The Department of Adult and Continuing Education can help in developing instructional/learning material at the proposed Institute of Educational Studies and Development. The institutions of higher learning can also take up such programmes of Adult Education. Such institutions can do useful research work for opening up different new areas and perfecting strategies of thrust.

12.26 The success of various schemes to eradicate illiteracy and tackle the adult education programmes, however, yet remains to be established in terms of the desired out-comes. This is more so in the absence of careful monitoring and evaluation. We are in favour of recommending the setting up of a State Monitoring Committee or an Adult Education Board, which would look into the Adult education programmes run by different agencies, monitor and co-ordinate them and suggest, from time to time, the strategies to streamline the functioning of such programmes. This step, we believe, would give an impetus to all adult education programmes in the state and bring them into sharp focus, without which all efforts in this direction are only getting diffused. In chapter XI we have

Adult Education Board.

already suggested the setting up of such a board with the D.G.P.I.

Continuing
education.

12.27 When the system of non-formal education gets fully established in another decade or so, we hopefully expect that provisions for continuing education will be made to cover persons from different walks of life who can be given purposeful learning experiences to improve their economic conditions, social status and individual competencies, as warranted by developments in science and technology to fit in more proficiently in their own work place. The district learning system developed on the lines of open school can bring nearly the entire unorganised sector of human resource under meaningful programmes of continuing education. This sector constitutes a larger proportion of work force which cannot, in any way, be brought under the formal system. This experience will be new but worth trying. The use of print, media and educational technology would constitute the communication channels for teaching and learning.

12.28 The non-formal system of education, in coming years must gain a place of privilege for itself as a support system and complementary to the formal system. We would, therefore, suggest that all non-formal education programmes for various target groups be put under the administrative control of an Additional Director of Education and a separate cell, with adequate staff, be created for this purpose, supported by an organised sub-system in the field for effectively implementing and monitoring these programmes of non-formal education in the state.

Supporting
strategies.

12.29 The impact of science and technology and the increased number of people in the educational system have made it imperative to devise new strategies for supporting the traditional system of education. We feel that educational technology and guidance and counselling services can be of immense utility in supporting the educational system, both formal and non-formal, especially in the context of the explosion of knowledge and increased expectations from education.

Educational
technology.

12.30 Today, we are more conscious of the technologies by which information is conveyed. Aids existed in the past as well, but the choice was restricted. Besides books, the blackboard was being used as a visual aid and the teacher's voice as an audio-aid. In this situation the environment beyond the class room remained hidden from view. The position of such aids is quite different now. In the modern world we have multi-media kits, video-cassettes, close-circuit television and computer assisted learning programmes in addition to the traditional aids. The use of these devices has revolutionised educational practices in advanced countries of the world, and has also resulted in providing laudable support to the educational system.

12.31 India now has a satellite which relays T.V. programme on the national network. Community viewing of these programmes can be encouraged wherever possible. However, this could only supplement our educational effort and not replace it. Varied types of classroom situations, seminars or tutorial sessions can be devised for vocational and technical courses requiring a great deal of visuals; and programmes for teachers' further education can also be taken up without their having to leave their institutions. Micro-electronics is entering every human endeavour and is developing situations which will transform the way we work, learn and manage our everyday lives. Computers have brought about a revolution in storing and disseminating information. The whole process of writing and publishing books and the storing and dissemination of information gets radically revolutionised with these new technologies.

12.32 We believe that video-cassettes offer more versatile medium for interactive learning in our situation due to easy and quick accessibility to any part of the cassette and its easy use and flexibility without an elaborate support system. Excellent programmes can be put on the tape for use in the present situation or broadcast through T. V. channels in due course when the infra-structure can be suitably reorganised.

12.33 In a learning situation both the materials (software) and equipment (hardware) are needed to transmit learning experiences. The terms software and hardware, however, project a limited view of educational technology. We are convinced that educational technology is a systems approach applied to different sectors of the educational process. It (the total educational process) needs to be considered as a system with components/sub-systems in which the linkages and co-ordination of linkages for optimum productivity constitutes the educational technology content.

12.34 In relation to the educational process we have in mind the role of educational technology in interlinking the goals translated into learning objectives, matches with appropriate strategies of teaching by devising appropriate instructional material, with an inbuilt system of feed-back for homeostatic adjustments and culminating in optimum student achievement. The emphasis here does not lie exclusively on the use of hardware. It rather lies in systematically analysing the learning process and making use of hardware as a supporting strategy, as and when required.

12.35 Educational technology can be utilised for both quantitative expansion of education and for its qualitative improvement. For quantitative expansion it would be a facilitating device in taking the educational message to a large number of target groups such as drop-outs from the school system, adult illiterates and such other groups as may require continuing education at their own work place. This would require a greater use of hardware.

12.36. To build a network of media and hard ware technology for educational use would require preparation, time and resources. We are, therefore, hesitant in recommending an outright use of hardware technologies. It will require phasing depending upon the availability of resources. The T. V. and Radio, to begin with, can be suitably put to use to propagate the education message. A variety of programmes, whether for illiterates or for further education, can be effectively planned through these devices.

12.37 For qualitative improvement it would provide help strategies to learning and the mechanism to match the same to the objectives and the learners' characterisation. This would require a systems approach to teaching and learning which could help in improving the quality of education. This is true in both the situations — with formal as well as non-formal systems of education. An appropriate educational technology, if used in educational settings, would re-inforce learning, thus ensuring qualitative improvement.

Central
scheme for
Computer
Literacy.

12.38 It is reliably learnt from the project proposals of the Department of electronics that computers and video sets are likely to be made available to a large number of schools and colleges. Already, the initial exercise of providing a microprocessor to 250 selected schools all over the country has been completed. Students from standard IX to XII will be trained in the use of these computers. Teachers' training programmes for this purpose have also been conducted. There is another proposal to conduct computer literacy programmes for students of classes IX and X and computer vocational courses and computer programming courses for classes XI and XII. These programmes are likely to meet the projected manpower requirements of low level computer professionals. We hope that these computers to begin with would be placed in the Learning Research Centres. We support these computer literacy programmes to prepare ourselves for the future, and suggest that these be included in our vocational courses at the Plus 2 stage.

Technology
for Higher
Education.

12.39 University education remains academic and theoretical by and large. The explosion of knowledge and requirements of varied skills for the masses have given rise to the need for diversified courses of short and long term duration of vocational and professional education. Full-time formal education, therefore, needs to be supplemented by the latest technological advancements and information communication network. This will require exploiting the potential of Educational Technology.

12.40 Educational courses should be prepared by experts in the field and circulated on a large scale. In this way teaching and learning would not be concentrated in the colleges and universities but would get diffused in the society through tape circulation, and through package courses over the media. The

U.G.C. has taken the initiative to herald the era of modern technology in higher education. One hour programmes are telecast on higher education every day. This is, however, in the formative stages and cannot create an impact until it is organised as a part of a well designed and integrated system. It has also been decided to make what are called enriched programmes at the under-graduate level. Topics in different disciplines related to national development such as agricultural and industrial progress, secularism, socialism, etc., will be selected. There will be special programmes for teachers in higher education. Some selected world class T.V. programmes are also being procured.

12.41 Wider utilisation of these technologies through an educational network can be envisaged and established for teaching and extension activities, but this will take some time. In the meantime we recommend the use of cassettes, learning packages and the print programmes on a large scale. The class room teacher can supplement his teaching by using such instructional material. The additional inputs thus provided would enrich the quality of teaching and learning. We strongly recommend that our concern should be to secure and produce software to supplement teaching. This will help us to improve the quality of our present educational inputs.

12.42 With the intention to renew the educational system by using innovative strategies it is desirable that teachers be updated as far as their knowledge and professional competencies are concerned. For this purpose pre-service training provides the basis. Besides pre-service training, we feel that in-service training programmes on a continuous basis, and with adequate follow-up, are vitally needed for improving educational standards. We have given a detailed scheme of school based training in the chapter on Teacher Education. We are equally concerned about toning up the supervisory and administrative staff, and are convinced of the utility of orientation courses for all those categories, including educational planners.

Training of
Educational
Personnel.

12.43 The use of educational technology is not restricted to merely modernising education from outside by providing equipment but also includes the preparation of programmes for using the equipment, inserting them into traditional pedagogic activities to make a systematic use of available resources and to develop scientific awareness among learners. The preparation and development of software to be fed into hardware technology is a laborious process which is time consuming. It would certainly require preparation, and we should endeavour to start early on it.

12.44 The literacy rate in Punjab at present, as given earlier, is 40.86 per cent according to the 1981 census. In the age group 15—35 years there are approximately 34.37 lac illiterates. Out of the 12 districts in Punjab the literacy percentage in four

Technology
for Adult
Education.

districts is below the national average of 36.23 per cent. We would recommend that in an advance state like Punjab the illiterary be eradicated within the minimum period of time, say, by 1990. The details have been given earlier while discussing adult education. Utilisation of the mass media supported by suitable printed materials will not only help eradicate illiteracy but will also provide functional literacy.

Technology for
Continuing
Education.

12.45 In the field of higher education we have identified the two-fold problems which can be tackled through the application of educational technology. The first refers to the provision of alternative ways of learning in educational institutions is both academic and professional courses. Through the educational technology approach repertoire courses can be provided from which the beneficiaries can select appropriate course units according to their need. Simultaneously, there is a sizeable number of aspirants wishing to enhance their educational qualifications, who fail to get admissions in institutions of higher education either because of limited seats or the low level of their achievement at the school stage. Obviously, there is a need for continuing education for this target population. The distance learning system can be appropriately used here, since it follows the pattern of open university. We are, however, recommending the establishment of one open school in the state to gain experience with this system of education. The target group can be provided course inputs through print and non-print materials. We would like to limit it to only print and tapes initially but eventually radio, television, computer, and V.C.R.'s would gain currency.

Present
Position.

12.46 The present situation in respect of utilisation of educational technology is not very encouraging. Although the Educational Technology Cell attached to SCERT is required to function for the school going population, their efforts have not yielded any results. Conceptually it has not been boldly conceived, with the result that it has had very limited success. Proper linkages with other units forming the educational system are missing. The Educational Technology Cell is supposed to broadcast radio lessons for use in schools, conduct seminars on the use of educational technology, organise script writers' workshops and prepare slides for school children. But the picture of an average primary and secondary school of Punjab remains unaffected by the existing educational technology set-up. For most of these schools educational use of the radio is new, that of projective media is ceremonial, while television and computers are remote and unreal dreams.

Educational
Technology
Sub-system.

12.47 We have, in Chapter VII, recommended a Department of Educational Technology to be set up in the proposed Institute of Educational Studies and Development. This Department should run programmes for in-service teachers on a large scale. Besides, it would develop appropriate software for use in formal and non-formal system of education for qualitative improvement.

12.48 In Chapter VII our main thrust was to explore possibilities in providing continuous in service education to all teachers and use educational technology for that purpose. In this chapter we wish to bring into focus its scope for improving the teaching-learning process and also for catering to the educational needs of various target groups.

12.49 The District Development Centres headed by trained educational technologists would store/collect instructional material from the Department of Educational Technology for onward transmission to Learning Resource Centres, which would be located in selected school complexes. To start with, we have recommended 100 higher secondary schools to be converted into learning resource centres, i.e., 8 schools per district, to be extended to twice this number by the end of the country.

12.50 The learning Resource Centres would acquire the status of centrality for all innovative educational programmes both for formal and non-formal systems. A trained educational technologist at this centre would act as a resource person for the feeder institutions attached to the centre, who would keep in constant touch with the district unit, as also with the schools and centres in the neighbourhood.

12.51 The instructional materials would be placed in the Learning Resource Centres and the various target groups, including teachers for in-service training, would come to the centre for exposure. We expect the District Development Centres to have direct communication with the Department of Educational Technology in the proposed Institute of Educational Studies and Development in matters of academic interest. These centres would obtain materials from the Educational Technology Department as per requirement of teachers who, in the course of in-service training, would be coming to the districts. The SCERT being the main monitoring agency in the State would monitor these programmes and supply the feedback obtained from the field to the Department of Educational Technology for modifying the instructional materials. Likewise the non-formal system of education would utilise the resources available with the Learning Resource Centres as far as their own programmes of Adult and Functional Literacy and Continuing Education are concerned.

12.52 The Department of Educational Technology will act as a viable nucleus of training, research and development and, in collaboration with other departments in the Institute, develop programmes for all categories of target groups. It would also establish a communication research data base and a communication network for the extensive and efficient utilisation of those data on a State-wide basis. Selected research

projects could also be initiated to test the validity and usefulness of the programmes being conducted.

12.53 We recommend that large scale software production should be ensured through proper orientation, multi-disciplinary teams of experts and specialists in education, language and media technology can be formed and a team approach adopted.

12.54 Research in distance education should also given due recognition in the educational system. In order to support teaching research and production of software and to disseminate information, a journal devoted to new technologies be supported and/or started by this department.

12.55 Some of the rural primary schools, we believe, have two teachers for the time being for the teaching of five classes. We feel that one medium band transistor and one cassette recorder, if provided to such schools, could supplement the work of teachers. It does not, however, mean that such equipment would replace teachers. Adequate staff will have to be given to all schools alike in due course of time, depending upon the mobilisation of resources. Use of the minimum need-based educational technology would certainly improve educational standards.

12.56 Some components of the curriculum can be projected on air or transferred on to cassettes for the enrichment of our teaching programmes. This may be developed through a regular process of communication with the Department of Educational Technology, and in collaboration with SCERT and the Directorates of Education. The enrichment programmes for the curriculum up to Secondary School stage may be tried in a district for preparing area specific material. The programme should work under coordinated administrative and academic supervision and be followed up regularly by way of feed back studies. For the preparation and validation of instructional packages, we feel that the faculty of the proposed institute should be sufficiently trained.

12.57 A course on educational technology will need to be run by the Institute of Educational Studies and Development and the universities in the state. The products of this course will be needed for manning the District Development Centres at the district headquarters, Learning Resource Centres and the school complexes. We expect that a qualified educational technologist will also act as a resource person for running orientation programmes for teachers to acquaint them with appropriate technologies for improving educational standards.

12.58 It would be desirable, if the list of proposed programmes in printed form or on cassette accompanied by slides are made available to the schools through the District Education officers regarding the vitalisation and use of radio and

cassette programme. The schedule of school-radio programmes for at least three months in advance will have to be circulated to all schools, so that the teachers may prepare themselves well in advance for effectively handling their lessons. Likewise, the other target groups as mentioned earlier in this chapter, can be brought together at a place where the use of educational technology, in one way or the other, can supplement the knowledge acquired through traditional methods.

12.59 By mobilising resources from the central Government, state Government and voluntary agencies, we hope that a strong base of educational technology, as a support system, can be developed in Punjab. The environment of the average community in this state is moderately advanced. It has economically, sociologically and technologically attained a level where the immediate use of radio and audio-cassette and eventual use of T.V. for educational purposes may not be out of place.

12.60 Like educational technology well organised guidance and counselling services can render valuable support to the educational system. Guidance, in terms of reading services to the pupils, aims at the maximum development of the individual's potential by providing assistance in making correct choices and decisions and helping with personal problems. It forms an integral part of the total education system with its focus on personality development, behavioural changes and preparation of the individual for living in society. Guidance and Counselling.

12.61 The aims of guidance are both adjustive and developmental. Therefore, there should be a provision for an organised guidance programme, well knit with the educational system, and widely spread to cover the entire student community.

12.62 Such a guidance service can help in numerous ways, such as curriculum designing, modification of teaching strategies, selection and administration of psychological tests, identification of the gifted, backward, maladjusted and problem children and organising and implementing enriched and remedial programmes.

12.63 Realising the importance of guidance for schools, the State Government set up a Guidance Bureau in the Punjab as early as 1960-61. The bureau intensified its work from the year 1970-71. Now the state is supposed to have a three tier organisation of guidance services, namely; State Level, District Level and School Level.

12.64 At the State Level, the bureau is required to maintain an educational and occupational information centre headed by the Director, assisted by one Senior Assistant (a) State Level Set up.

Counsellor and two Technical Assistants. They are expected to perform the following functions :

- (i) training personnel,
- (ii) organisation of career conferences,
- (iii) research and publication of psychological tests,
- (iv) counselling; and
- (v) coordination amongst different agencies working for similar objectives.

(b) District
Level Set-up.

12.65 At the district level, an Assistant Guidance Counsellor is supposed to be in charge of the guidance cell, but permanent posts exist only in three districts—Amritsar, Jalandhar and Patiala. In the remaining nine districts this work is assigned to Social Studies teachers. The guidance cell is expected to provide guidance services in the schools apart from arranging educational and career conferences, career talks, exhibitions etc. The district counsellors adopt a number of schools for organising guidance services, administering psychological tests, conducting surveys and for follow-up action.

(c) School
Level Set-up.

12.66 At the school level a definite structure of guidance services has not been developed. Only three schools at Patiala, Jalandhar and Ferozepore have posts of school counsellors. In other schools there is hardly any satisfactory arrangement for counselling.

Deficits in the
the existing
Set-up.

12.67 On the evidence of available information we understand that the present set-up of guidance services at the State, District and School level does not have an adequate infrastructure to provide meaningful programmes. There is a glaring dearth of trained personnel, equipment, materials and financial resources. In the face of these shortages it was inevitable that their performance should fall short of the expected goals. They have not been able to live up to the expectation of providing leadership and direction to these programmes.

12.68 The maladies of guidance services were further accentuated by not being able to create a class of teacher counsellors in the institutions to help in maintaining personal record cards, cumulative records and such other information and data as could be useful to the professional counsellors in giving personal and educational guidance.

12.69 Most of the non-formal education programmes also suffer a set-back, because the services of counsellors for out of school youths are almost non-existent.

12.70 It is imperative for an efficient guidance machinery to evolve ways and means of using the different resources available in the community. This could be achieved only by

developing linkages with employment exchanges, chambers of commerce and industries, professional organisations, youth organisations, medical and health services, social welfare agencies, community service clubs, Rotary Clubs, Lions Clubs etc. But no such efforts have been made to seek community support.

12.71 We have emphasised in this report the need for strengthening Learning Resource Centres throughout the state in a phased manner for providing support strategies to both formal and non-formal systems of education. It is our hope that in about ten years time all the school complexes in the State would attain the status of Learning Resource Centres, wherein the services of professionalised counsellors would also be available to various target groups. Through these centres, and with the help of counsellors, it would be possible to divert the academically motivated students in the academic stream and vocationally minded pupils into the vocational stream at the Plus 2 stage in the 10+2+3 system. The personal data of students up to the matriculation level would form the basis for all such counselling. This step if taken betimes, would accelerate the pace of achieving the goals of vocationalisation through identification and placement of students in the vocational stream according to their abilities, interests and aptitude, thereby helping in reducing wastage and stagnation. It would also reduce pressure on colleges and universities.

12.72 We would like to sound a note of caution here. Appointing untrained or semi-trained persons against specialised jobs does more harm than good to the system. The work of a counsellor is going to acquire paramount importance in coming years. His work will be highly specialised and the counsel extremely valuable. Half-baked personnel, in our view, should, therefore, never be appointed against these specialised posts.

12.73 In view of the emerging trends in education, there will be a tremendous pressure to give professional training to eligible men/women for acting as counsellors, who will be required in large numbers. We have stressed the need for such a training in Chapter VII, and we would expect universities and the proposed Institute of Educational Studies and Development to run such courses on a continuous basis.

12.74 The guidance services have to be reorganised more systematically and meaningfully in the state. We recommend that the Bureau of Guidance and Counselling be placed under the administrative control of a more senior officer of the rank of Additional Director of Education, who would function under the direction on the Director General of Education for better coordination as also for policy formulation. The Bureau must have specialists in the field of Guidance and Counselling on its staff.

Professional
Training of
Counsellors.

Reorganising
Guidance
Services.

12.75 In the field, it may not be possible to organise professional counselling and guidance services at the primary level for want of resources. Perhaps at that level specialised services in each school may not also be required. The classes at the primary stage are organised on single teacher basis, and the teacher has the occasion to be in touch with all the students in his class on a more intimate footing. With some guidance and counselling training he/she could act as a counsellor to these schools and may be able to maintain their records. Special cases of maladjustment or problem children could always be referred to the professional counsellor available at the learning resource centre to start with and eventually at each school complex. These teachers could work under the professional counsellors at the nucleus school in the complex. We recommend the organisation of strong centres of guidance and counselling at the levels of District and Learning Resource Centres. These centres would provide counselling services to the various target groups, as mentioned earlier. The Counsellor at the Learning Resource Centre could also organise orientation courses to train teachers at all levels of school cycle in the techniques for collecting personal data of students, identifying the gifted and mentally retarded, the problem children and other maladjusted pupils. The professional counsellor can utilise such data for purposes of his counselling.

12.76 We have recommended in this report the introduction of certain new programmes such as value oriented education, creativity, work experience etc. For this purpose 20 per cent of time has been allocated which, if not utilised optimally, would amount to wastage of educational effort. We would like to entrust the task of identifying the pupil's interests to counsellors so as to match these with various work experience activities. We expect the professional counsellor of the Learning Resource Centre to provide this service on the basis of the personal data of the students to be collected and maintained by each institution through counsellor teachers under their guidance and supervision.

12.77 We have also recommended special schemes for the gifted in Chapter IX. We would expect counsellors to carry on follow-up studies of this group which would provide necessary feedback for adjusting educational programmes for them.

12.78 An effective counselling service presupposes the maintenance of cumulative record cards and complete information regarding academic, extra curricular and psychological aspects of pupils. In fact, the cumulative record cards should be passed on to higher institutions of learning in the event of a pupil joining a higher course. The maintenance of this record and other information in schools would require the assistance of teachers, who should be well conversant with the technique of collecting these data through orientation courses run by the counsellors located at Learning Resource

Centres. Students at the Plus 2 level would need an added input of vocational guidance, such as information about employment prospects and placement services which must be well knit with vocational education.

12.79 The Directorate of Education, SCERT, State Bureau of Guidance and Counselling and the department of Guidance and Counselling at the proposed Institute of Educational Studies and Development would work in collaboration with one another for successfully implementing guidance and counselling services.

12.80 We believe that the Bureau undertakes intensive field studies, monitors and evaluates counselling services and transmits the information thus obtained to the Institute of Educational Studies and Development, which would offer consultancy services and develop suitable materials including psychological tests and other pro formas. We have recommended re-inforcement of staff at the district and Learning Resource Centre levels. The services of the same staff could be utilised for monitoring work and for obtaining feedback from the field.

12.81 The Bureau will procure from time to time, guidance material developed by the Institute of Educational Studies and Development, and will make it available to the district and learning resource centre re-counsellors. It is also expected to organise periodic conferences and seminars for guidance workers, provide consultancy services to lower cadres, and maintain liaison between the activities of different agencies such as Employment Exchange, Department of Labour and Employment, District and Learning Resource Centre Level Counsellors. The Bureau, we believe, will eventually take up the role of community orientation, ensuring greater awareness of the educational process and problems.

12.82 The importance of counselling at the higher educational level also needs to be taken into cognisance. In the initial stages it may not be possible to appoint one counsellor in each college. It would, therefore, be the minimum requirement to recruit one counsellor for a cluster of colleges located in close geographical vicinity, who will be responsible for organising guidance services, maintaining liaison with Employment Exchanges, industries and other establishments for placement and follow-up, and would, at the same time, provide counselling services to the students.

12.83 We are conscious that additional costs will have to be incurred in providing guidance services in the state. So far as the training of personnel is concerned the facilities are available in the universities, and would also be added in the proposed Institute of Educational Studies and Development. However, additional costs would be needed for developing programmes and materials. Such costs will not be very high and would be worthwhile expenditure.

12.84 Well organised and planned guidance programmes established as a support system would prove to be as meaningful and purposeful as education itself.

12.85 The non-formal system of education, educational technology and guidance and counselling, we visualise, would constitute sub-systems supportive to the formal system with inter-linkages among its constituents and linkages with the Department of Educational Technology, District Development Centres learning resource Centres, Community Resource Centres and other monitoring and administrative agencies.

SUMMARY OF

CHAPTER XII : SUPPORT SYSTEMS IN EDUCATION

NON-FORMAL EDUCATION

1. We strongly favour the development of an efficient system of non-formal education, which could be complementary to the formal system. The need to have non-formal education has emerged out of the present demands of the community and the limitations of the formal system. (12.01)

2. The formal system is essentially a single entry programme, hierarchical in character, and is expensive. The target groups that need to be covered in the non-formal system, include (a) infants and children below the age of 6 years for whom educational facilities cannot be created within the formal system; (b) children in the age group 6-11 and 11-14 years who dropped out of the system; (c) target group above 15 years of age who are unemployed or employed and are in need of further education; (d) 15-35 age group of illiterates who need to be covered under literacy programmes; and (e) continuing education for all. (12.01-06)

3. The infants and children in the pre-school age group need early stimulation programmes for their cognitive development in subsequent years. Integrated child development programmes will hopefully, catch up in Punjab for this age group. It would be desirable to leave it to the welfare Department and other voluntary agencies, which need to be supported financially to a much greater extent than at (12.07-08)

4. The drop-outs in the age-group 6-11 and 11-14 years should be covered through non-formal education programmes and be given educational content to make up for the deficiency resulting from non-attendance or dropping out of the system with intentions of bringing them back to the formal system. These two age groups can be given education in the schools in their own time and the supervision of the programmes run for them can be entrusted to the heads of the school complexes. Community support through PTA's, effective use of technology of education, and additional input of teachers on a part-time or full-time basis can help in the realisation of this goal. (12.09-12)

5. For the age group 15 and above the open school can provide an alternative channel for further education to the drop-outs, left-outs, girls and women, and adults

from economically deprived classes. The success of the open school system would depend on proper counselling, preparation and production of high quality course material, use of educational technology and provision of study and resource centres based at the learning resource centres. The open learning system can also meet the educational needs of the working force in the age group 15 years and above as well as of those who could not avail themselves of the facilities of regular schooling. The Open School System, if set up at the proposed Institute of Educational Studies and Development, would provide a much needed opportunity to experiment with non-formal and continuing education. At least one open school could be provided in the state to give a fair trial to non-formal and continuing education through this strategy.

(12.13-15)

6. The adult illiterates in the age-group 15-35 years, who constitute a sizeable chunk of our population and happen to be a priority group inasmuch as they are required to be covered under literacy programmes to make them more productive and, therefore, less prone to frustration, need to be covered under Functional Literacy, through Non-Formal Education. In addition to the rural functional literacy project for the age group (15-35), social education programmes, Nehru Yuvak Kendras, University Centres of Adult and Continuing Education, and N.S.S., there appears to be need for diversifying our approaches to cover the huge numbers in this group, which can be tackled by utilizing the services of unemployed educated youth, teachers from the school system, students from colleges and universities, and voluntary agencies.

(12.16-24)

7. Under the schemes of adult literacy while developing the learning materials, it will be necessary to keep in mind the psychology of adults, their needs and the availability of resources in their neighbourhood. The workers both in industry and agriculture can be motivated, only if meaningful learning experiences, related Adult and Continuing Education in the Institute of Educational Studies and Development can help in developing such material in collaboration with the Board of Adult Education proposed to be constituted.

(12.25)

8. In order to realise the objective of eradicating illiteracy it would be essential to set up a State Monitoring Committee, which would look into the adult education programmes run by different agencies, monitor and coordinate them and suggest, from time to time, the strategies to streamline the functioning of various programmes.

(12.36)

9. When the system of non-formal education gets fully established, provision for continuing education could be made to cover persons from different walks of life, who could be

given a purposeful learning experience to improve their economic conditions, social status and individual competencies. The non-formal system of education in coming years must gain a place of privilege for itself as a support system complementary to the formal system.

(12.27-28)

EDUCATIONAL TECHNOLOGY

10. The impact of science and technology and the increased number of people in the educational system have made it imperative to devise new strategies for supporting the traditional system of education. Educational Technology can be of immense utility in supporting the educational system, both formal and non-formal. In the modern world educational use of multi-media kits-video cassettes, close circuit TV and computers—is effectively being made in education in addition to the traditional aids. Video cassettes offer a versatile medium for learning. Excellent programmes can be put on the tape for use in the present situation or broadcast through TV channels in due course, when the infrastructure can be suitably re-organised.

(12.29-32)

11. Educational technology is not merely the use of the software and hardware but goes beyond, to explain the educational process as a system. It, inter-alia, links the goals of education translated in the learning objectives, matched with appropriate strategies of teaching with an in-built system of feed-back, culminating in optimum student achievement.

(12.33-34)

12. It can be utilized for both quantitative expansion of education and for its qualitative improvement. It is a facilitating device for carrying the educational message to a large number of target groups, which would require a greater use of hardware and production of software on a massive scale. All out use of hardware technology, may however, not be feasible right away. This would require phasing. For qualitative improvement it would provide helping strategies to learning and a mechanism to match the same to the objectives and learners' characterisation. This is true in both the situations with the formal as well as non-formal system of education.

(12.35-36)

13. Computers and video sets are likely to be made available to a large number of schools for students' use. The computer literacy programmes for classes 9-10 and computer vocational courses for classes 11-12 could be taken in hand with advantage as soon as possible, but that is only preparing ourselves for the use of sophisticated technology in the future.

14. Educational use of technology can also be made at the level of higher education and in vocational and professional education. The enriched programmes at the undergraduate level, special programmes for agricultural and industrial progress etc can be developed and put to effective

use for vocational education. The use of cassettes, learning packages and the print programmes on a large scale can supplement class-room teaching at all levels of education.

(12.39-41)

15. With the intention of renewing the educational system by using innovative strategies, it is desirable that teachers, administrators and policy makers are also given orientation courses to update their knowledge, for which purpose educational technology can be used in a befitting manner. The preparation and development of software to be used with the hardware technology would require considerable preparation for its production and we should endeavour to start on it.

(12.42-43)

16. The present situation in respect of utilization of educational technology in the State of Punjab is not very encouraging. It is not being used either for in-service training of teachers or as a support system. The mere use of hardware to show some visuals does not constitute the utilization of educational technology. It has to be formulated as a sub-system in the educational process. The organisational set-up for such a sub-system should consist of an apex body, such as a centre for educational technology as suggested by the Central Government, to produce and refine the softwares for use by the client schools. In our case we propose that the Department of Educational Technology in the proposed Institute of Educational Studies and Development acts as an apex centre, supported by District Development Centres which will distribute educational programmes —both print and non-print with the help of the specialists, maintain libraries of the software and devise refinement mechanisms from time to time on a continuous basis. The package programmes will be distributed to the Learning Resource Centres which should be created at 200 higher secondary schools suitably equipped for the purpose to provide service to the neighbouring schools in respect of all innovative educational programmes both for formal and non-formal systems. These Resource Centres will acquire the status of centrality for all field operations in respect of E.T., guidance and counselling and in-service training of teachers. They will also act as centres for face to face contact in respect of non-formal educational programmes organised in the neighbourhood. It would be expected that in due course of time, this facility will be extended to all Senior Secondary Schools in the state, which will act as Learning Resource Centres. The Education Department would be in touch with the sub-system through SCERT which should act as the research and development arm of the department.

17. In order to make educational technology a reality it would be necessary to have qualified educational technologists at the levels of district and learning resource centres, for which purpose a course on educational technology will need

to be run. Research in distance education should also be given more serious consideration to prepare ourselves for the challenges of the 21st century when there will be a greater demand from the community for continuing and higher education. For disseminating information a journal devoted to new technologies needs to be started and supported.

18. It would be useful to circulate, well in advance, the schedule of various educational technology programmes in schools. It would help in bringing various target groups to a place where such facilities are available. A strong base of educational technology as a support system can be developed in Punjab, if the resources of the Central Government, State Government and Voluntary agencies are mobilised.

(12.58—59)

Guidance and Counselling :

19. Like educational technology well organised guidance and counselling services can render valuable support to the educational system by making it possible to help develop the individuals' potential optimally.

(12.60—62)

20. The present status of guidance services in Punjab is far from satisfactory due, mainly, to inadequate infrastructure and a glaring dearth of trained personnel, equipment, materials and financial resources. Most of their programmes today suffer because of inadequacy of such support.

(12.63—70)

21. Guidance and Counselling is not only needed to help the maladjusted or problem children but it is equally essential for the other children, including the gifted and creative children, to help them to develop their full potential. Guidance in the case of the bulk of the students is needed to identify their aptitude and talents so that they can build on the same for the benefit of the individual and society. A well organised Guidance and Counselling Service is, therefore, a very important complementary service to the formal educational system for obtaining optimal results.

22. Owing to the paucity of resources attempts are being made to utilize teacher counsellors after giving them short training where specialist expertise is needed. While this may be acceptable it may even be logical and rational at the primary stage where the teacher is intimately in contact with the students in a single teacher class, for senior classes specialists would be needed. All attempts at appointing untrained or semi-trained counsellors in our enthusiasm to introduce this service in our schools should be resisted.

23. In order to adequately man this service for our educational system a large number of specially trained personnel will be needed. In addition there would be need for

short term training for teacher Counsellors for the primary sector. The training of all these specialists will have to be organised on a continuous basis by the universities or the Institute of Educational Studies and Development.

24. The Guidance services will have to be reorganised in the state. The Bureau of Guidance and Counselling would require to be placed under the administrative control of a senior officer of the rank of Additional Director of education who should function under the DGPI for better coordination as also for policy formulation. (12.74)

25. The Bureau could play a pivotal rôle in organising guidance services in the state. In a sub-system similar to the one described for educational technology, the Bureau will form the apex body with District Development Centres and Learning Resource Centres as its components forming the Counselling Sub-system.

26. The Counsellors at the Learning Resource Centre would work as a king-pin in this system would provide professional services and guidance to the feeder institutions and also organise orientation courses to train teachers at all levels of the school cycle in the techniques of collecting personal data of students in the form of cumulative records of their performance and aptitude identification, without which no guidance or counselling is possible. These basic data are also needed for identification of the talented and those with some special potentialities such as writers, artists or creative Scientists and Technologists whose talents have to be specially nurtured.

27. Most of the counselling will be taken care of by teacher counsellors at the primary stage, where it may not be feasible to provide professional counsellors. Problem cases requiring special attention could be referred to the counsellor at the Learning Resource Centre, who could advise remedial measures. At the plus 2 stage vocational guidance would also begin besides personal and academic guidance.

28. It would be worthwhile to entrust the task of identifying the pupils' interests to counsellors so as to match the same with various work experience activities. They may also be required to carry on studies of gifted groups of students to be covered under special schmes. (12.75—78)

29. The Directorate of Education, SCERT, State Bureau of Guidance and Counselling, and the Department of Guidance and Counselling at the proposed Institute of Educational Studies and Development would work in collaboration for successful implementation of chanelising the youth according to their aptitudes. The Bureau will undertake intensive field studies, monitor and evaluate counselling services and transmit this information to the Institute of Educational

Studies and Development, which would offer consultancy services and develop suitable materials. Reinforcement of staff at the district and learning resource centre levels will be required for effectively running such programmes. The Bureau would also establish with the activities of employment exchanges, the Department of Labour and Employment and such other agencies which can be helpful in providing job information and placement services. (12.79—81)

30. Counselling at the higher educational level is equally important, for which purpose one counsellor for a cluster of college may be appointed in the initial stages. (12.82)

31. This will entail additional costs. But a well organised guidance programme would prove to be as meaningful and purposeful as education itself. (12.84)

32. The non-formal system of education, educational technology and guidance and counselling, as visualised here, would constitute sub-systems, supportive to the formal system.

CHAPTER XIII

EDUCATIONAL FINANCE

13.01 Punjab is the most prosperous state in India. Its per capita income, Rs. 3,164 in 1981-82, was far above the national average of Rs. 1,758.

13.02 But, contrary to the economic level achieved by the state, Punjab continues to accord a relatively low priority to education, as the share of the state's income spent on education through government revenue would indicate. It is generally expected that with the rising level of the economy the share of educational expenditure in the total should progressively rise, because education "is the main means both of perpetuating the values and skills of its population and of preparing it for the changes which progress requires"¹

13.03 Punjab, between 1979-80 and 1981-82, spent an average of 2.7 per cent of its net domestic product (NDP) as revenue expenditure on education, which was much lower than the all states' average of 3.3 per cent. In other comparable states this share was 2.4 per cent in Haryana, 3.5 per cent in Karnataka, 6.2 per cent in Kerala, 2.7 per cent in Maharashtra, 3.9 per cent in Tamil Nadu, 2.6 per cent in Uttar Pradesh and 3.2 per cent in West Bengal (Table 13.1). Most of the civilised societies of the world spend up to 6 per cent of their gross domestic product on education². In India, among the comparatively developed states, while Kerala and Himachal Pradesh exceeded this level of 6 per cent in recent years, Punjab lagged far behind it.

The Back-ground.

TABLE 13.1: Expenditure on Education and Net State Domestic Product at Current Prices
(Average for the period 1979-82)

State	Net State domestic product (Rs. Crores)	Expenditure on education (Rs. lakhs)	Expenditure on education as % of State income	Rank
Andhra Pradesh	71,27.1	2,32.30	3.26	11
Assam	24,04.3	92.38	3.84	7
Bihar	62,66.7	2,35.34	3.76	8
Gujrat	63,55.1	1,81.35	2.95	14
Haryana	29,20.9	69.68	2.39	18
Himachal Pradesh	6,47.3	41.06	6.34	2

¹UNESCO, Economic and Social Aspects of Educational Planning 1964. F. 11.

²*Ibid* P. 23.

State	Net State domestic product (Rs. Crores)	Expenditure on education (Rs. lakhs)	Expenditure on education as % of State income	Rank
Jammu and Kashmir	8,67.2	41.74	4.81	5
Karnataka	4,978.1	1,72.60	3.47	10
Kerala	34,51.9	2,14.05	6.20	3
Madhya Pradesh	55,79.6	1,71.90	3.08	12
Maharashtra	1,39,90.4	3,73.69	2.67	16
Manipur	1,72.9	17.83	12.48	1
Meghalaya	1,51.5	8.85	5.84	4
Orissa	35,69.4	1,04.46	2.90	13
Punjab	4771.9	1,27.72	2.71	15
Rajasthan	41,79.4	1,49.08	3.57	9
Tamil Nadu	60,66.6	2,35.88	3.89	6
Uttar Pradesh	1,30,38.7	3,37.86	2.59	72
West Bengal	82,19.8	2,61.44	3.18	12
Total	9,39,46.2	30,68.19	3.27	

Source : R.B.I. Bulletins.

Note : Education includes Art and Culture, Scientific Service and Research.

13.04 The government's capacity to spend on education is conditioned, among other factors, by its capacity to raise revenue. Allocation of revenue for education depends not only on the priority accorded to it, but also on other competing social and economic programmes. In developing economies, where the availability of revenue is known to be a common constraint, competing priorities often restrict the government's capacity to spend on education.

13.05 Further, a comparison with the 19 major Indian States (hereafter referred to as all states) shows that Punjab, while topping in per capita income, ranks 15th in terms of the share of educational expenditure in NDP (Table 13.1). This means that Punjab's share of educational expenditure in NDP is lower than that in many of the economically backward states, such as Assam, Bihar, Orissa, Himachal Pradesh and Jammu and Kashmir.

13.06 Even though Punjab spends a higher-than-the-average proportion of its revenue on education, it ranks very low in terms of the proportion of state income spent on education. This anomaly arises from the fact that Punjab raises a very small proportion of its net domestic product as revenue.

13.07 The rate of revenue raising in Punjab has been rather low due, partly, to the large share of the primary sector in its domestic product. Punjab has a predominantly agrarian economy, which has traditionally remained out of the government's tax net. During the seventies the share of revenue in Punjab's net domestic product increased from 9.9 per cent to just around 12.4 per cent whereas, during this period, it had increased from 9.9 per cent to 15.6 per cent for all states taken together.

TABLE 13.2: Mobilisation of Revenue and Expenditure on Education (Average for 1979-80 to 1981-82)

State	Share of revenue receipts in NDP		Share of Expenditure on education		Share of expenditure on education in total revenue expenditure	
	Per cent	Rank	Per cent	Rank	Per cent	Rank
Andhra Pradesh	18.1	9	18.0	10	19.6	13
Assam	16.0	12	24.0	2	25.9	2
Bihar	16.1	11	23.4	4	25.8	3
Gujarat	15.8	14	18.0	11	20.2	10
Haryana	16.0	13	15.0	17	17.4	17
Himachal Pradesh	37.0	3	17.1	15	22.4	17
Jammu and Kashmir	29.2	4	16.5	16	16.5	16
Karnataka	19.7	8	17.6	13	19.6	14
Kerala	20.1	6	30.8	1	32.8	1
Madhya Pradesh	20.5	5	15.0	18	17.6	16
Maharashtra	14.8	17	18.0	12	19.5	15
Manipur	64.9	1	19.2	8	25.5	4
Meghalaya	51.2	2	11.4	19	14.7	19
Orissa	15.8	15	18.4	9	19.9	12
Punjab	12.5	19	21.7	5	23.8	5
Rajasthan	18.1	10	19.8	6	20.8	9
Tamil Nadu	20.1	7	19.3	7	21.1	8
Uttar Pradesh	14.9	16	17.3	14	20.0	11
West Bengal	13.3	18	23.9	3	23.0	6
All States	16.9		19.3		21.1	

13.08 For the triennium ending 1981-82 the average share of revenue receipts in Punjab's net domestic product at 12.5 per cent was the lowest in the country, as against the all-states average of 16.9 per cent and 16 per cent in the adjoining state of Haryana and as high as 37 per cent in Himachal Pradesh, 20.1 per cent in Tamil Nadu and Kerala and 20.5 per cent in Madhya Pradesh (Table 13.2).

13.09 The share of revenue expenditure on education in the total was, however, higher in Punjab than the all-states average of 21.1 per cent in the triennium ending 1981-82. Punjab incurred 23.8 per cent of its revenue expenditure on education, which was higher than in most of the comparable states, except Kerala, where this proportion was as high as 32.8 per cent.

13.10 Also, what appears noticeable, while in most of the comparable states the share of expenditure on education, in total revenue expenditure, declined over the seventies, it remained relatively steady in Punjab. (Table 13.3).

TABLE 13.3 : Growth of Expenditure a Education—Punjab and other Major States As percent of revenue expenditure)

Triennium ending	Punjab	Andhra Pradesh	Haryana	Karnataka	Kerala	Maharashtra
1971-72	.. 24.6	22.5	23.6	24.1	37.2	20.7
1981-82	.. 23.8	19.6	17.4	19.6	32.8	19.5

13.11 Notwithstanding the fact that a large primary sector restricts the government's capacity to raise public resources, Punjab's low share of revenue in its NDP does not look wholly explained. For the country as a whole the share of the primary sector in the national income in 1980-81 was about 41 per cent, compared to 44.5 per cent in Punjab. But the aggregate revenue raised by all states formed 16.9 per cent in India's NDP compared with only 12.5 per cent in the State of Punjab. A somewhat larger primary sector, than for the country as a whole, does not justify such a marked difference in revenue mobilisation. Haryana, a neighbouring state, provides a noticeable contrast, where the share of revenue raised by the government formed 15.5 per cent of NDP, even though the primary sector contributed about 52.8 per cent to the State's domestic product.

13.12 Sectoral distribution is only one factor that determines the proportion of revenue in the domestic product. What need to be looked into and remedied, are the causes responsible for the lower-than-the-average revenue mobilisation in Punjab with a view, finally, to increasing the allocation of funds for an adequate growth of education in the state.

13.13 Availability of resources to meet the growing requirements of education in Punjab will depend primarily on the state of its economy in the future. Growth of State Income—A Projection.

13.14 At the present juncture Punjab's economy presents a fairly optimistic picture, with buoyant agriculture and a steadily growing industrial sector. Precise estimates of the likely rate of growth in the next two decades differ, even

though it is agreed in all quarters that the state's economy has reached the take-off stage, and will grow steadily hereafter. Broadly, it is held in government circles that the state's economy will grow at a rate much faster than the one recorded during 1971—81, with agriculture growth at an annual rate of over 6 per cent, the secondary sector at around 10 per cent and the tertiary at 7-8 per cent. Their estimates can broadly be summarised as presented in Table 13.4 even though, in many quarters, these may be regarded as somewhat conservative.

TABLE 13.4 : Likely Growth of the Punjab Economy, 1981—2001 (Government Estimates)

	(Per cent per annum)				
	1971—81	1981—91	1991—96	1996—2000	1981—2001
Primary Sector	.. 3.9	6.0	6.0	6.0	6.0
Secondary Sector	.. 7.3	8.0	9.0	10.00	8.4
Tertiary Sector	.. 6.1	7.0	7.5	8.0	7.7
All sectors	.. 5.1	6.4	7.2	8.9	7.4

13.15 On these estimates the economy should grow at a real annual rate of about 7.4 per cent over the two decades. These estimates are based primarily on the optimism generated by the green revolution brought about in the State towards the mid-seventies. It is also felt that with the 100 per cent irrigation and a marked degree of mechanisation reached in agriculture, investible funds are generally finding their way into industry, which will achieve 'Phenomenal' growth in the years to come.

13.16 We, however, feel that these estimates, especially, for the primary sector, are somewhat over-optimistic. Notwithstanding the fact that Punjab possesses a developed infrastructure, resources and skilled man power, it appears unlikely that the average of 7.4 per cent real growth can be sustained over a two decade period. More particularly, it is unlikely that a 6 per cent growth of the primary sector, mainly agricultural, will be sustained.

13.17 A regression analysis of the growth shows that during 1971—81 Punjab's economy recorded an overall annual growth of 5.08 per cent — contributed by 3.92 per cent growth of the primary sector, 7.32 per cent of the secondary sector and 6.10 per cent of the tertiary sector.

13.18 The growth of the primary sector during 1971—81 was mainly contributed by the introduction of high yielding wheat varieties in agriculture, apart from the steady improvement in irrigation and fertilizer in-take. These factors

are not likely to exercise any major impact on agriculture in the near future — even though the possibility of some new technological breakthrough for crops cannot be wholly ruled out. As it is, there has been considerable improvement in the production of rice in the State and production of milk, poultry products, etc., is, reportedly, also on the increase. Yet agriculture, on the whole, is still somewhat dependent on the vagaries of nature — and will continue to be so in the near future.

13.19 Consequently, an average annual growth of about 6.5 per cent in real terms over 1981—2001 would seem more realistic.

TABLE 13.5 : Likely Growth of the Punjab Economy—1981—2001

	Per cent per annum		
	1981—91	1991—2001	1981—2001
Primary Sector ..	4.5	4.0	4.2
Secondary Sector ..	8.5	10.0	9.2
Tertiary Sector ..	6.0	7.0	6.5
All sectors ..	6.0	7.0	6.6

13.20 If, however, the actual growth turns out to be higher than what has been assumed by our consultants, the availability of funds for education will be greater than what we envisage. It would, nevertheless, be better to have a somewhat conservative view of the growth of the economy and plan for the development of education accordingly. Improved growth, and the consequent improvement in the availability of resources, will cause no problem whatsoever.

13.21 Moreover, the inadequate availability of power has been reported to be an important reason for less than the desired growth of industry, as well as agriculture, during the recent past. The optimism in government circles leading to the expectation of over 7 per cent growth during the next two decades assumes, among other things an easy availability of power during the period.

13.22 Notwithstanding the development programmes of the State, the easy availability of power is the one factor that cannot be taken for granted. According to the estimates presented by the Rajadyaksha Committee Report on Power, the economy will require about 15 per cent growth in power generation for an overall 6 per cent growth.

13.23 The Working Group on Energy, set up by the Government of Punjab under Shri R. S. Gill, was also of the view that for achieving an annual growth of about 6 per cent in the State's economy the state will require an annual growth

of about 16 per cent in the generation of power*. The growth of over 7.5 per cent, as anticipated in government circles, will thus require even a higher growth in power generation. It appears doubtful if this high rate of growth in power generation can be sustained during the eighties and nineties; which is, therefore, equally true of the assumed overall growth of the economy.

13.24 It is, however, important to note that in order to achieve the anticipated rate of growth the state will have to go in for capital intensive industries involving advanced technology. In order to sustain such development, as also to handle supporting activity in the tertiary sector, the State will require a much larger number of skilled workers and, consequently, expansion and development of its educational system.

Growth of
Student
Population.

13.25 With the growth in overall population of the State, student population will also increase. It is very likely that the student population will increase at a rate much faster than the rate of growth in the State's population.

13.26 During the sixties and seventies an effort was made by the government to introduce universal primary education for all children between 6 and 11 years of age. It is claimed that 100 per cent or nearly 100 per cent enrolment of children aged about 6 years, in class I was achieved by 1975. However, in spite of the fact that there are no external examinations in classes I to IV, there has been a sizeable percentage of drop-outs in subsequent classes, among those who join class I. As already stated, the available data for 1981-82, broadly show that only 41 per cent of the students joining class I reach the middle level, i.e., class VI. The remaining 59 per cent leave at various stages between classes I and V and thereafter for different sociological reasons, including lack of aptitude for studies. A much smaller proportion of those who reach class VI stays on to take up college, university or vocational courses. The drop-out in this category is due both to failures in examinations and sociological reasons.

13.27 The drop-out rate, all along the line, will have to be reduced in the coming years, for which suitable measures will have to be taken by the government. On the one hand government measures to improve schooling facilities will popularise education and, on the other, sociological factors, such as the growing awareness of the need for schooling and the growing competition in the job market, would induce school going children and young people to acquire as much formal education or vocational training as possible. Taking broadly into account the requirement of Punjab's growing economy, which is expected to diversify into high technology areas, for education and trained man power, it appears that

*Perspective Power Development Plan for Punjab; 1980-81 to 1999-2000;

the retention rate of students, starting with 100 per cent at the threshold level, will have to be improved all along the line. In 1981 only about 19 per cent of the students joining the primary schools reached class XI to continue further education (Table 13.6). A much smaller percentage stayed on to take up university/technical education. This should be gradually improved so that about 45 per cent of the initial student population should join class XI by 2001 A.D. This improvement in the retention rate may not be automatic and may require a new social awareness and change in the people's outlook.

TABLE 13.6: Students' Retention Rate in Punjab at Various Levels of Education (Existing and suggested)

		Class			(%)
		I	VI	IX	XI
As during 1981-82	..	100.00	48.8	29.6	19.2
Suggested for 1991-92	..	100.00	70.0	51.0	31.0
Suggested for 2001-02	..	100.00	90.0	68.0	45.0

13.28 The government will, therefore, have to take additional steps to popularise education and make it more interesting, especially at the primary and middle levels, and make necessary financial provisions to meet the consequent increase in the expenditure on education.

13.29 The population of Punjab, which increased by 23.9 per cent during 1971—81, is expected to grow at a slower rate during 1981—91 and 1991—2001. Since the present Punjab was created only in 1966, and enough data are not available to statistically project the future rate of population growth, it has been assumed here that the population of the State will grow by 21 per cent during 1981—91 and by 19 per cent during 1991—2001.

TABLE 13.7 : Expected Rate of population Growth in Punjab

		Actual 1971—81	(%)		
			Expected		
			1981—91	1991—2001	1981—2001
For the Decade	..	23.90	21.00	19.00	..
Compound year	..	2.16	1.92	1.75	1.83

13.30 The 1981 census data, as presently available, do not furnish a break-up of population by age groups to give an idea of the population belonging to the school going age groups. The latest, and the only, available age-groupwise break-up of population is for 1971, which can broadly be used to determine the population of eligible students for various levels of education.

13.31 The rate of population growth continued to be higher than expected until 1981, because in the initial phase of development while the death rate declined markedly, there was a less-than-expected decline in the birth rate. Now it is believed that the death rate, having reached a level nearly comparable with those prevailing in advanced countries, would not decline much, while the birth rate would drop noticeably in the near future. Consequently, the rate of population growth will show a steady decline.

13.32 On a *priori* reasoning, it may follow that as a result of the reduction in birth rate, the rate of rise in population in the lower strata of age groups will be lower than the overall rate of population growth. But since a good part of the decline in death rate would be due to reduction in infantile deaths, it appears safe to assume, in the absence of relevant data, that population in all student age groups, i.e., 6—10 years, 11—13 years, 14—17 years and 18—23 years, would increase at the average rate of population growth 21 per cent during 1981—91 and 19 per cent during 1991—2001.

13.33 Taking these broad features into account, it is expected that student population would rise at a rate of 4.1 per cent between 1981 and 1991 and by 3.4 per cent between 1991 and 2001. (Table 13.8). On these assumptions it is estimated that the number of students at the various levels of education in 1991-92 and 2001-02 will be as follows:

TABLE 13.8: Projected Estimates of Student Population (In thousands)

	Primary	Middle	Secondary/ Senior Secondary	College/ University (including Professional courses)	Total
Number in 1981-82	2,008	694	354	109	3,165
Annual rate of growth 1981-91 (%)	2.5	4.8	9.4	4.6	4.1
Number in 1991-92	2,565	1108	869	170	4,172
Annual rate of growth in 1991-2001 (%)	2.7	4.2	4.1	3.8	3.4
Number in 2001-02	3,358	1,673	1,298	248	5,577

13.34 The marked rise assumed in the number of students at the secondary/senior secondary levels, as shown in the table above, is on the assumption that the 10+2 system will soon be introduced in Punjab. This will add one more year for the students at the secondary level which, at present, is only up to Class XI.

Expenditure
on Education.

13.35 In 1980-81 Punjab Government spent Rs. 137.67 crores as revenue expenditure on education. The capital

budget showed a paltry expenditure of Rs. 1.15 crores on Education, Art, Culture, Scientific Services and Research. The share of capital expenditure on education being negligible in the total expenditure on education, discussion for the present will be confined to revenue expenditure. The requirement of capital expenditure, for creating fixed assets to aid education, will be discussed later in this report.

13.36 The revenue expenditure on education, however, is not entirely borne by the State Government. Several other bodies, apart from individuals and business undertakings, contribute directly or indirectly to the expenditure incurred by educational institutions. Important among these are* :—

- Central Government.
- University Grants Commission.
- Universities.

13.37 In 1980-81, the above mentioned institutions contributed about 18 per cent of the total expenditure on education in Punjab. The trend of expenditure by such institutions, however, cannot be projected for future years. For the purpose of this study, it has been assumed that these sources will continue to contribute their bit to the educational expenditure of the State, at least in the existing proportion of 18 per cent. Therefore, the present analysis relates only to the revenue expenditure on education by the State Government.

13.38 It is evident that a marked rise in the expenditure on education will be necessary for a wider coverage and qualitative improvement of education in the state. The increase in expenditure on education, in real terms, will be engendered by

- increase in the number of students, at all levels of education, as a result of the growth in population as well as the expected improvement in the retention rate at various levels;
- qualitative improvement in the system of education, including a real rise in the salaries of teachers;
- a gradual expansion of facilities for vocational studies;
- need for improvement in infrastructural facilities such as buildings, furniture, equipment, items of teaching aids, etc; and

*In most Indian States, local bodies run primary schools and levy an education cess on the House Tax to finance part of this expenditure. But in Punjab municipal bodies neither run such schools nor levy any cess to contribute to the educational expenditure.

—improvement in supporting educational facilities, such as scholarships, libraries, sport and other day to day conveniences.

13.39 Most of the existing institutions are ill equipped in respect of these facilities, and their requirements vary widely at the various levels of education and the type of courses imparted by them. An attempt has been made here to examine the existing position of various categories of institutions operating at different levels, such as primary, middle, secondary and college/university/professional institutes.

13.40 The available data show that the average per student expenditure increases sharply with the level of education (Table 13.9). It is also seen that the share of the recurring cost of teaching in the total is very high at lower levels of education and that recurring expenditure on other heads — such as maintenance, scholarships, library, sport, and on such items as building, furniture and equipment forms only a small proportion in the total expenditure.

TABLE 13.9 : Per Student Expenditure at various Levels Punjab 1980-81)

(Rupees)

	Recurring				Non-Recurring	Total
	Teachers' salaries	Other salaries	Other recurring	Total		
Primary	252.32 (98.5)	1.58 (0.6)	1.29 (0.5)	255.19 (99.6)	0.91 (0.4)	256.10 (100.0)
Middle	507.58 (86.2)	41.09 (7.0)	35.12 (6.0)	583.79 (99.2)	4.80 (0.8)	588.67 (100.0)
Secondary//Higher Secondary	466.81 (77.3)	63.23 (10.4)	66.52 (11.0)	598.56 (90.7)	8.14 (1.3)	606.70 (100.0)
University	668.09 (60.5)	154.22 (14.0)	n.a.	n.a.	n.a.	1102.10 (100.0)
Professional Colleges	1,799.22 (44.7)	834.12 (20.7)	n.a.	n.a.	n.a.	4,024.93 (100.0)

13.41 It is felt that there is need for a real rise in teachers, salaries to attract better talent to the teaching profession, as well as to improve the lot of the existing teachers so as to enable them to contribute more efficiently to the task of nation building. In order to accord a suitable status to teachers in society it may be desirable to raise their grades, bringing them at par with some suitable grades in the existing Government hierarchy. This question will, however, have to be examined by some pay commission. In any case,

n.a. : Not available.

Note :—Figures in brackets indicate percentage share in the total.

this will require an additional financial commitment on the part of the state government.

13.42 An examination of the past data shows that teachers' salaries in Punjab rose by 3.7 per cent and 3.8 per cent annually, in real terms, during 1971—81, for primary and high school teachers, respectively. Thus their salaries have improved, but may have to be improved further in future. In our estimates we have provided for an average real rise in the teachers' salary of 4.5% per annum during 1981—91 and 5.4% per annum during 1991—2001.

13.43 Equally important is the need to increase the other components of per student expenditure—recurring as well as non-recurring — to bring about a qualitative improvement in the standard of educational institutions. This is required at all levels of education, particularly the primary and middle levels where, reportedly, there is a pressing need for certain basic necessities, such as buildings and furniture. Simultaneously, with the growing number of students and improvement in education there will be need for capital investment at all levels of education for buildings, furniture, laboratory equipment, transport, office machine and the like. Such expenditure, though necessary for creating a congenial atmosphere for studies and for the efficient running of educational institutions, forms an insignificant part of the total expenditure at present. The anomaly cannot be rectified in a short period of time but a gradual improvement in the various components of per student expenditure, too reach a desired level, is necessary. In our estimates, it has been assumed that the suggested norms will be reached by the end of this century.

13.44 It is suggested that the proportionate distribution of expenditure on teachers' salaries, other salaries, other recurring expenses, non-recurring expenses, etc., which is at present heavily tilted towards teachers' salaries, be rationalised gradually to provide for higher capital outlays and other recurring expenses as shown in Table 13.10.

13.45 The main emphasis in the suggested composition of per student expenditure is on stepping up rather sharply the provision for expenditure on capital investment, non-teaching staff and on the non-salary recurring expenditure, all of which have hitherto been ridiculously low despite their importance for creating a congenial atmosphere for education. The proportion of expenditure under all these three categories will rise with the level of education, with a corresponding fall in the proportion of teachers' salary in the total.

TABLE 13.10: Composition of per Student Expenditure

(Per cent)

	Recurring						Non-recurring	Grand Total
	Salaries		Total salaries	Other	Total			
	Teaching	Non-teaching						
Primary:								
1980-81	98.52	0.62	99.14	0.51	99.65	0.35	100.00	
1991-92	90.00	3.0	93.0	4.0	97.0	3.0	100.00	
2001-02	85.00	5.0	90.0	6.0	96.0	5.0	100.00	
Middle:								
1980-81	86.22	6.98	93.20	5.97	99.17	0.83	100.00	
1991-92	81.3	7.0	88.8	8.2	97.0	3.0	100.00	
2001-02	80.0	8.0	88.0	8.0	96.0	4.0	100.00	
Secondary/Senior Secondary:								
(a) General—								
1980-81	77.27	10.42	87.69	10.97	98.66	1.34	100.00	
1981-82	74.0	11.00	85.00	11.00	96.0	4.0	100.00	
2001-02	72.0	11.5	83.5	11.5	95.0	5.0	100.00	
(b) Vocational (for 1991-92 to 2001-02)								
(i) Engineering and allied—								
	49.5	18.00	67.5	26.0	93.5	6.5	100.00	
	54.5	16.0	70.0	23.0	93.5	6.5	100.00	
(ii) Para-Medical, Agriculture and allied—								
	53.5	14.0	77.5	20.0	93.5	6.5	100.00	
(iii) Commerce and Business—								
	64.5	14.0	78.5	15.0	93.5	6.4	100.00	
College/University:								
1980-81	60.62	13.99	74.6	n.a.	n.a.	n.a.	100.00	
1991-92	57.3	15.1	72.4	22.6	22.0	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	n.a.	n.a.	n.a.	100.00	
1991-92	42.0	24.0	66.0	25.0	92.0	8.0	100.00	
2001-02	40.0	26.0	66.0	26.0	92.0	8.0	100.00	

n.a : Not available.

13.46 This means that while teachers' salaries should rise steadily in real terms, recurring expenses on other heads, especially on such facilities as Library, scholarships, hostel, games, electricity, drinking water and maintenance and capital expenditure on building, furniture, laboratory equipment,

office machines, etc., should rise at a much faster rate. Consequently, while teachers' salaries will rise in absolute terms, their share in the total per student expenditure will decline with the passage of time so that the share of teachers' salaries in the total per student expenditure will be lower than what it is now. But in absolute terms both teachers' salaries and total per student expenditure will have to rise steadily over the years.

13.47 We are informed that, at present, a sizeable number of schools, especially primary and middle, have no proper buildings — in many cases, nothing more than a shed and a compound wall. Nor do they have such basic facilities as furniture. This may be regarded as a backlog for capital investment which, according to an estimate prepared by the Education Department, Punjab, was of the order of Rs. 131 crores in 1983. The actual amount required to clear the backlog will, however, depend on the quality of building, furniture, etc., that are decided on to be created.

The Capital
Backlog.

13.48 The estimates of annual expenditure requirement presented in this report do not provide for the clearance of any such backlog. This may be treated under a separate head as an initial gap, for which resources may be raised independently. The size of the backlog is quite large and it cannot be cleared in a short period of time. Its burden on the state exchequer will also depend on the period within which this backlog is sought to be cleared. We are of the view that it should be cleared by 1994-95, in such a manner that more essential facilities should be provided at the earliest possible date.

13.49. In addition, we are convinced that there is a pressing need for setting up certain state level institutions, such as;

- an autonomous Institute for Educational Studies and Development,
- colleges for further education,
- regional centres for education technology and learning resource centres, and
- some other Support Systems such as non-formal education, open school, Counselling and Guidance Network etc.

for development and administration to meet the growing needs of education in the state. On rough estimates the creation of these institutions, which should also be accomplished within the next ten years, i.e., by 1994-95, will require an investment of Rs. 60 crores. The expenditure on these schemes could be spread over the next ten years in a progressive manner.

13.50. The burden of investment on backlog and other special schemes can be distributed over the next ten years in the following manner:—

TABLE 13.11: Expenditure for Capital Backlog and Special Schemes

Year	Backlog	Special Schemes	Total (Rs. in crores)
1985-86	4.4	1.1	5.5
1986-87	8.7	2.2	10.9
1987-88	13.1	3.3	16.4
1988-89	17.5	4.4	21.9
1989-90	21.8	5.5	27.3
1990-91	21.8	6.5	28.3
1991-92	17.5	7.6	25.1
1992-93	13.1	8.7	21.8
1993-94	8.7	9.8	18.5
1994-95	4.4	10.8	15.3
Total	131.0	60.0	191

n.a. : Not available

13.51 There are certain additional requirements which will impose an additional burden on the state exchequer. In the first place, there is an impending scheme of the State Government to change over to the 10+2 system. At present students go for a three year under-graduate course. After passing the higher secondary examination, which is equivalent to the eleventh class. After the proposed change it is likely that the three year degree course will be available to the students after they have studied up to 10+2, an equivalent of the twelfth class. The proposed change will, thus, add an extra year of education at the pre-university level, and will consequently need an extra financial commitment. The estimates of expenditure presented in this report include extra expenditure on this account. If, however, a two year degree course is considered suitable, the overall financial requirement will get correspondingly reduced from what we have estimated here.

Vocational Courses.

13.52 Secondly, we are of the view that vocational courses should be introduced at the senior secondary level i.e. the +2 level after class X, so as to reduce the growing number of the white-collar unemployed, and train young people in good time to fill in the gap of managers and technicians—Electrical, electronic, leather, printing, tailoring, wood-work, etc. — society is likely to face in future years.

13.53 For this purpose, the state has industrial training institutes which have a total capacity for training about 12,000 students in para-engineering vocations. In view of the expected growth of the economy in the future, and the need for trained personnel in other vocations, provision should be made so that the share of student population at the +2 level going for vocational courses should increase to about 15 per cent in 1991-92 and 25 per cent in 2001-02. This will require a sizeable additional expenditure, because such vocational courses, besides requiring initial capital investment for the machinery and equipment needed for such instruction, will involve an extra recurring expenditure on new material, such as metals, wood, cloth and tools.

13.54 No firm estimates on the cost of vocational courses — which vary widely with the type of vocation — are available. Broadly, these courses can be grouped under the following categories :

- Engineering, such as draftsmen, mechanics for TV, radio, refrigeration, scooter/motor, electroplater, fitter, turner, welder and pattern maker.
- Para-medical, such as diploma in pharmacy, nursing, midwifery, X-ray technician and health visitor.
- Agriculture, such as soil science, agronomy, horticulture, poultry farming and agriculture extension.
- Commerce and trade, such as accountancy, salesmanship, tourism, book publishing, interior decoration, beauty culture, textile designing, food preservation, journalism, library science and physical training.
- Home Science, such as cutting and tailoring, embroidery and needle work, knitting, dyeing and printing etc.

13.55 This scheme will cover a large number of courses varying widely in nature and, therefore, in the cost of their execution. Some of these courses require intensive practical training and, thus, will require a sizeable initial capital investment. Among these engineering and para-medical courses are expected to be the most costly, even though information on their detailed per student costs are not available.

13.56 Many of these courses are currently available at some existing institutions, such as Industrial Training Institutes (ITI) and polytechnics. The programme of expanding vocational courses and extending them to an increasing number of students, as suggested above, will require many more

ITI's and polytechnics, unless such courses are covered under the scheme of general education. In that case, again, the cost of education will depend on how practical training is imparted to the students opting for such courses.

13.57 A recent study by the curriculum Development Centre, Technical Teachers' Training Institute, Chandigarh* has estimated that the recurring per student cost in major vocational courses in engineering will be as high as Rs. 4,450 per annum as against Rs. 606 for general courses, at the Plus 2 level. Further, the study indicates that the capital cost in respect of such courses will also be very high — Rs. 23.77 lacs for an institution of 540 students. If the capital cost be spread over a ten year period, the annual average capital cost will come to about Rs. 4,400 per student per year. On these assumptions the cost per student for certain vocational courses in engineering will roughly be as high as Rs. 8,950 per year, i.e. about 15 times the cost entailed by general education at the corresponding level.

13.58 As can be understood, most other courses will most much less than the engineering courses. However, it is expected that if independent comprehensive courses are conducted at the institution level, the cost of vocational courses will be higher than that of the general courses. In the absence of detailed cost data for most of these courses it is not possible to arrive at an average cost for all vocations. Rough estimates suggest that if provision is made to impart practical training independently at the various institutions — which will require sizeable capital investment at all such institutions — the average cost per student would in all probability, be between Rs. 3,500 and 4,000 per year, as against Rs. 606 i.e. at least 6 times that in respect of general courses.

13.59 This, however, does not appear to be such a sound and practical proposition both in view of its financial implications and the state's capacity to set up so many such institutes in the near future. A practical alternative, which has been suggested, may be to conduct such courses in some educational institutions, in certain cities which have established units, related to the respective vocations, in a commutable vicinity, where practical training can be imparted on argeed terms. In this manner the help of industry can be sought to train the man power it may need in the future. This can help in saving on sizeable capital investment. An alternative, especially in the case of courses for which practical training cannot be arranged with the help of outside agencies, will be to use the existing capacity for training students in more than one shift. This, in our view, seems a feasible and attractive solution worth exploring.

13.60 In the absence of data we had to base our judgement on discussions with certain institutions and scholars for

*Draft Norms and Standards, for Diploma Institutions, September, 1982 (Mimeographed).

arriving at an average annual student cost in this regard. We have assumed that, on the average, vocational courses will cost between Rs. 1,800 and 2,400 at the 1980-81 prices, which is at the most 4 times higher than the average for general courses.

13.61 It is also felt, as was recommended by the Kothari Commission in 1965, that 10 per cent of the existing educational institutions upto the secondary level should be run as model institutions to set some sort of a standard in teaching. The expenditure on salaries in such institutions could be around 10 per cent higher than in other institutions. In our estimates we have provided for this additional expenditure.

13.62 At the higher level, i.e. college and university education, no separate estimates have been made, even though cost of education is known to be markedly different for arts and science students. Student undergoing professional courses, such as medicine, engineering, business administration and computer science, have been placed in a separate group. A detailed break-up of students studying these courses is not available. In future, too, the number of students going in for such studies will depend on, among other things, how many engineers, doctors, administrators, technicians, etc., are required. Considering, broadly, the need of the growing population, it has been assumed here that the proportion of students going in for advanced courses will rise from 5.3 per cent of the population in the 18—23 year 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, i.e., those studying general courses in colleges and universities and others in professional institutions studying medicine, engineering and the like. This exercise, thus, broadly indicates the amount of money that will be required to impart education to students at higher levels in the next two decades without specifying the break-up of students under various disciplines.

13.63. The number of teachers in Punjab appears, and large, fair for the number of students the state has. At most levels, the existing teacher student ratio in Punjab conforms to the norms laid down by the Kothari Commission.

TABLE 13.12 : Teacher Student Ratio

	Punjab 1980-81	Suggested by Kothari Commission	Recommend- ed
Primary	.. 40	45	40
Middle	.. 18	35	25
Secondary/Sr. Secondary	.. 24	25	20
Vocational Courses	15
College/University	.. 25	15	15
Professiona Institutions	.. 9	..	10

13.64 In the case of the 'middle' section, however, the existing number of teachers appears much larger than what would be considered optimum or appropriate. In contrast to a reasonably good ratio of 35 students to one teacher at the 'middle' level, Punjab has only 18 students to one teacher (Table 13.12). This means that, for many years to come, no new teachers may be added at the middle level, even though the number of students will keep on rising, both as a result of the natural growth in student population and a decline in the drop-out rate. We have already suggested elsewhere how to deal with this problem.

13.65 While the teacher student ratio appears passable on the aggregate, it is reported that at the level of most institutions it is not so. There are some institutions with a much smaller number of students per teacher. There are others where the average work load per teacher is much higher than the state average.

13.66 Notwithstanding the data, it is believed in certain quarters that the teacher student ratio is much more favourable in Punjab than what the statistics would reveal. This is believed to be particularly true at the 'primary' level. It is held by some persons, having first hand knowledge of the situations, that even though 100 per cent enrolment has been achieved in class I, as claimed by the authorities, a sizeable number of students seldom attend classes. This fact is reflected, somewhat, in the number of drop-outs in class I. While 100 per cent children, in the age group broadly corresponding to the class, are enrolled in class I, less than three-fourths reach class II. The near 25 per cent drop-outs when there are no detentions on account of failure in examination, since there are no examinations upto class IV — comprise those who leave school because of family or social or financial compulsions. It is argued that these 25 per cent never attend the class, and do not wait to leave the school till the term is over: they leave school soon after they are supposedly enrolled in class I. Thus in fact, only about 75 per cent of the students, supposedly enrolled, attend class I. This brings down the teacher student ratio to about 1 : 30 against the recommended 1 : 40 or 1 : 45 as revealed by the data. This practice is also true of classes II, III, IV and V, where students keep dropping out during the session.

13.67 In the absence of relevant information it is difficult to determine precisely the manner in which such drop-outs leave the school — whether they leave the school soon after enrolment, or after the completion of the term or in some regularly phased manner. This process, nevertheless, improves the teacher student ratio for the primary section. There is reason to believe that Punjab's teacher student ratio is more favourable than 1 : 40, as shown by the data, and may be placed at least around 1 : 35.

13.68 This means that there are more teachers than considered good on the basis of the accepted ratio of 1 : 40. In that event, it will not be necessary to recruit a proportionate number of teachers in the next few years until the consequent teacher student ratio reaches the desired level. This should, in fact, pose no problem so far as the availability of funds is concerned, because this will result in some financial saving. We have, in this study, taken no account of the possible saving on this account because of the lack of adequate information. However, any such saving can be diverted to expedite the clearance of the backlog in capital stock — such as the cost of building and furniture — for schools which lack basic facilities.

13.69 On the basis of the norms discussed earlier, the requirement of expenditure for education, at the 1980-81 prices will be of the order of Rs. 453 crores in 1991-92 and Rs. 1,181 crores in 2001-02. ^{Growth of Expenditure.}

13.70 At present, about 82 per cent of the total expenditure on education is met by the state exchequer, the balance being the contribution of some other agencies such as the Central Government and the University Grants Commission. Assuming that these institutions will continue to contribute in the existing proportion in future, too, the burden of financing education on the state exchequer will rise from Rs. 138 crores in 1980-81 to Rs. 371 crores by 1991-92 and Rs. 968 crores by 2001-02 (Table 13.13). Of these amounts the share of capital expenditure, which forms only a negligible amount in the total expenditure by the state at present, will be of the order of Rs. 17 crores in 1991-92 and Rs. 55 crores in 2001-02 (Table 13.14). Thus, the requirement of revenue expenditure by the state will rise to Rs. 345.6 crores by 1991-92 and Rs. 913.3 crores by 2001-02.

TABLE 13.13: State's share in the Total Expenditure on Education

Year	Total Expenditure (Rs. in lacs)	Expenditure by the State (Rs. in lacs)	State's share in total expenditure on education (%)
1977-78	95,37	78,23	82.0
1978-79	105,37	89,39	84.0
1979-80	123,76	101,27	81.8
1980-81	N.A.	137,67	82.0 (Assumed)
1991-92	452,83	371,32	82.0
2001-02	1,180,72	968,19	82.0

13.71 Expenditure by the State Government will form about 82 per cent of the total expenditure on education on the basis of the trend in the late seventies,

TABLE 13.14: Estimated Requirement of Expenditure on Education—Statewise (at 1980-81 prices)

State	Item	Rs. in lacs		Share in total (%)	
		1991-92	2001-02	1991-92	2001-02
Primary	1. Direct Recurring	1,31,34	2,97,85	93.6	90.9
	2. Indirect Recurring	5,13	17,80	3.7	5.4
	3. Capital outlay	3,85	12,09	2.7	3.7
	Total (Primary)	1,40,32	3,27,74	100.0	100.0
Middle	1. Direct Recurring	95,27	2,46,70	89.8	89.0
	2. Indirect Recurring	7,98	20,42	7.5	7.3
	3. Capital outlay	2,88	10,21	2.7	3.7
	Total (Middle)	106,13	2,77,33	100.97	100.0
Secondary	1. Direct Recurring	66,46	1,68,77	86.2	84.8
	2. Indirect Recurring	7,84	21,16	10.2	10.6
	3. Capital outlay	2,80	9,21	3.6	4.6
	Total (Secondary)	77,10	199,14	100.0	100.0
Senior Secondary (General)	1. Direct Recurring	36,16	82,18	86.2	84.8
	2. Indirect Recurring	4,25	10,29	10.1	10.6
	3. Capital outlay	1,55	4,49	3.7	4.6
Total Sr. Secondary General	41,96	96,96	100.0	100.0	
Senior Secondary (Vocational)	1. Direct Recurring	8,51	35,96	74.4	74.7
	2. Indirect Recurring	2,24	9,17	19.6	19.7
	3. Capital Outlay	69	3,00	6.0	6.2
Total Sr. Sec. Vocational	11,44	48,93	109.9	190.0	
Total School Level	1. Direct Recurring	3,37,74	8,31,66	789.6	87.6
	2. Indirect Recurring	27,44	78,84	7.3	8.3
	3. Capital outlay	11,77	39,00	3.1	4.1
Total (School Level)	3,76,95	9,49,30	100.0	100.0	
Colleges and Professional Institutes	1. Direct Recurring	52,52	1,59,17	69.2	68.8
	2. Indirect Recurring	18,43	56,30	24.3	24.3
	3. Capital outlay	4,93	15,94	6.5	6.9
Total (Advanced Courses)	75,88	2,31,41	100.0	100.0	
Grand Total	1. Direct Recurring	3,90,26	9,90,64	86.2	83.9
	2. Indirect Recurring	45,87	1,35,14	10.1	11.4
	C. Capital outlay	16,70	54,94	3.7	4.7
Total (All levels)	4,52,83	11,80,72	100.0	100.0	

13.72 Assuming that the share of revenue receipts in the net domestic product of the State will be no higher than 13 per cent and the share of revenue expenditure on education in the total no higher than 25 per cent, as in 1981-82, the available revenue will fall short of the required resources. This deficit, however, will be much smaller, if the State's economy grows at the rate expected in Government circles, which happens to be much higher than the rate of growth assumed by our consultants.

13.73 Assuming that the Punjab economy grows at an average annual rate of 6.6 per cent, as visualised, revenue expenditure on education at the existing rate of allocation will fall short of the required resources by Rs. 73 crores in 1991-92 and by Rs. 363 crores in 2001-02 (Table 13.15). A resource gap of this order, representing 20.6 per cent of the likely revenue expenditure on education in 1991-92 and 39.7 per cent in 2001-02 will require additional resource mobilisation, if the envisaged educational development programme is to be carried out. This gap, though not small when judged by the existing norms of expenditure on education, represents only 0.84 per cent of the likely NDP in 1991-92 and 2.14 per cent in 2001-02. Viewed thus, the gap does not appear to be very large, especially in the light of the fact that the present share of educational expenditure in the NDP is very low.

TABLE 13.15: Estimated Gap Between Anticipated Requirement and Availability of Funds for Education

(Rupees in lacs)

Year	Requirement of funds for expenditure on education	Estimated availability of funds		Estimated gap on the basis of	
		Assumption I*	Assumption II*	Assumption I	Assumption II
1991-92	354,62	281,48.00	293,83,00	73,14	60,79
2001-02	913,25	553,33.00	637,05.00	362,92	276.20

13.74. This resource gap can be wiped off by raising the share of revenue in the State NDP, by way of an upward revision of the existing rates of levies, or by enlarging the tax net to yield higher revenue. Increasing the share of revenue receipts in the NDP to 16.3 per cent in 1991-92 and 21.6 per cent in 2001-02, from the level of 13 per cent in 1981-82, can ensure the generation of the amount required for the

*Assumption regarding the average annual growth of Punjab economy between 1980-81 and 2001-02.

I*66 per cent (Compound) NCAER estimate.

II*7.4 per cent (Compound) expected in State Government circles.

envisaged educational reforms, without altering the existing pattern of fund allocation for various heads of expenditure, i.e., education continuing to receive 25 per cent of the total revenue expenditure.

13.75. Alternatively, if the share of revenue in the NDP is kept unchanged at 13 per cent, an increase in the allocation for educational expenditure, from 25 per cent in 1981-82 to 31.5 per cent in 1991-92 and 41.5 per cent in 2001-02 will be required to bridge the resource gap.

13.76. Also, a combination of a smaller increase under both the above mentioned parameters can be employed to yield the desired amount. For example, an increase to 14 per cent in the share of revenue receipts in the NDP and a rise in revenue allocation for education to 29.2 per cent can together yield Rs. 354.62 crores required for expenditure on education in 1991-92. Similarly, a suitable combination of the two can be arrived at to fill in the likely gap of Rs. 362.92 crores in 2001-02. However, an effort in both these directions would be called for, if the change in a single parameter to the desired extent is difficult to implement. In the present case, the gap being not too large, both these—the share of revenue in NDP and share of expenditure on education in total revenue—can singularly be manipulated to yield the desired revenue.

13.77. The advantage with the former, i.e., raising of higher proportion of the NDP as revenue receipts, is that it would yield higher resources not only for education but equally for other items of expenditure. If, however, rise in expenditure is not simultaneously desired under other heads, a much smaller rise in the revenue—NDP ratio will be required. Moreover, the existing revenue—NDP ratio in Punjab being rather low, less than 13 per cent, compared with the all-States average of 17 per cent, and over 20 per cent in some other States, such as Kerala, Karnataka, Tamil Nadu, Madhya Pradesh, and Himachal Pradesh, there is a good case for raising a much higher proportion of the State's income as revenue in Punjab.

13.78. The advantage with the other, i.e., rise in allocation of expenditure for education without changing the revenue—NDP ratio, is that it does not involve any rise in the rates of tax and non-tax revenue. But, on the other hand, a higher allocation for education, without any enlargement of the State's financial resources, will amount to an equivalent reduction in allocation for other sections, which cannot be visualised or recommended, unless the entire expenditure pattern is thoroughly examined.

13.79. Simultaneously, the existing share of expenditure on education in Punjab in total revenue expenditure, which on an average was about 24 per cent between 1979-80 and 1981-82,

does not appear to be low. It was next only to Kerala's and much higher than the proportions that existed in other major States, Maharashtra, West Bengal, Haryana, Gujarat, etc. (Table 13.3). Also, while in most other States the proportion of expenditure allocation for education has declined over the last few years, it remained relatively steady in Punjab. Considering all these factors, it may not be very practical to allot a much higher share to education from the available revenue.

13.80. What broadly emerges is that, given the rate of growth of Punjab's economy as assumed by us, the gap in revenue requirement for educational development will not be unmanageable, and can be filled in by an appropriate rise in the State's revenue. Considering the small quantum of additional revenue requirement for this purpose, raising the requisite amount should pose no problem, especially in view of the fact that Punjab's revenue—NDP ratio is one of the lowest in the country. The fact that Punjab has a large agricultural sector, which hardly contributes to the State exchequer, cannot be stretched too far. This is, by and large, true of India as a whole and most of the States individually. As already stated, even Haryana, an adjoining State with a much larger primary sector, is raising over 16 per cent of the State's NDP as revenue compared with only 13 per cent in the Punjab.

13.81. Moreover, it is expected that over the years Punjab's secondary and tertiary sectors will grow at rates much faster than agriculture. The composition of Punjab's income distribution is, thus, likely to change in favour of non-agricultural sectors, thereby raising the State's capacity to mop up higher revenue. In all likelihood, this change of the income distribution pattern will itself lead to an incremental resource generation to bridge a part of the resource gap for educational development.

13.82. If, however, Punjab's economy grows at a higher rate than the one estimated by NCAER, and clocks 7.4 per annum as believed in Government circles, the resource gap at the existing rates of allocation will be much smaller, i.e., Rs. 60.8 crores in 1991-92 and Rs. 276.2 crores in 2001-02 (Table 13.15) representing 0.7 per cent and 1.4 per cent of the NDP in the respective years. In that event it will be much easier to bridge the resource gap for the implementation of the educational programmes in the State.

13.83. The revenue expenditure mentioned above is, however, not the only amount that is required for financing the desired educational development schemes. In addition, what the system requires is a sizeable investment in buildings, furniture, equipment, laboratory apparatus, office machines and other items needed for making teaching easier and more interesting to the students.

13.84. So far, capital expenditure on education has been rather insignificant in Punjab, as in most other States. In Punjab capital expenditure under the head Education, Culture, Art and Scientific Services and Research formed 1.5 per cent of the State's total capital expenditure and 0.2 per cent of the State's total revenue expenditure in 1980-81. This inadequate allocation under the capital account led to the inadequate development of infrastructural facilities in the field of education.

13.85. The pattern of development outlined above provides for a marked increase in capital investment in education so that, altogether, capital expenditure will form about 3.7 per cent of the total expenditure on education in 1991-92 and 4.7 per cent in 2001-02. For taking up the schemes outlined earlier the requirement of capital expenditure for education will rise from about Rs. 1 crore in 1981-82 to Rs. 16.7 crores in 1991-92 and Rs. 54.9 crores in 2001-02. In addition there will be an expenditure of Rs. 191 crores for the clearance of backlog and the creation of special institutions, phased over a period of the next 10 years in a manner, as detailed earlier in Table 13.11. If the amounts required to clear the existing backlog of school buildings, furniture, etc., and also for special schemes be included, the capital expenditure requirement would rise to Rs. 41.8 crores in 1991-92. It will, however, remain unchanged at Rs. 54.7 crores in 2001-02, because the completion of the schemes is provided for by the year 1994-95. Thus, the capital budget of the State will have to provide for a corresponding rise in its capital receipts, through the usual sources; loans from the public, loans from the Central Government, bonds, etc., in addition to the accepted practice of generating higher surpluses under the revenue account and diverting them to finance such capital schemes.

13.86. Further, individuals, industrial houses, charitable trusts, etc., can be invited and induced to finance specific educational projects, such as a school building, library, laboratory or a stadium, which could be named after them.

13.87. Altogether, the requirement of funds for financing additional expenditure for educational development in Punjab does not appear to be very large. The total expenditure of Rs. 371.3 crores in 1991-92 and 968.2 crores in 2001-02, which includes capital expenditure, will form 4.29 per cent and 5.72 per cent of the likely NDP in the two respective years. If, however, the State's economy grows at a rate higher than the one assumed by NCAER, the suggested expenditure on education will claim a lower share of the State's income. Punjab's economy is poised to attain a sizeable growth, and there is considerable unexploited potential capable of yielding the requisite funds.

SUMMARY OF

CHAPTER XIII : EDUCATIONAL FINANCE

1. Among the major Indian states, the proportion of educational expenditure in the state's NDP was the highest in Kerala and Himachal Pradesh — over 6.2 per cent followed by 3.9 per cent in Tamil Nadu, 3.8 per cent in Bihar, 3.6 per cent in Rajasthan, 3.5 per cent in Karnataka and 3.3 per cent in Andhra Pradesh, Punjab occupied the 15th place.

(13.1)

2. Although Punjab is the most prosperous state in the Indian Union, as the per capita income would indicate, its share of expenditure on education has so far been as low as 2.7 per cent of its net domestic product in 1979—82, compared with the national average of 3.3 per cent.

(13.3)

3. Punjab spends more than the average proportion of its revenue expenditure on education. In this respect it is next only to Kerala. Its low ranking in respect of the share of domestic product spent on education results from the fact that Punjab raises a very small share of its net domestic product as revenue.

(13.6)

4. The low rate of revenue raising in Punjab is partly due to the fact that the State has a large primary sector, which has traditionally remained out of the tax net. This fact, however, does not wholly explain the situation. Punjab's primary sector, representing 44.5 per cent share in NDP, is only slightly higher than the country's 41 per cent, but Punjab raised only 12.15 per cent of its NDP as revenue during 1979-82, which was markedly lower than the national average of 16.9 per cent.

(13.7—13.11)

5. Availability of resources to meet the development of education in Punjab will depend primarily on the state of its economy in the future. It is believed in government circles that the state's economy, which grew at the rate of 5.1 per cent per annum during 1971—81, will do so on an average rate of 7.4 per cent during 1981—2001. However, we are of the view that a 6.6 per cent growth rate appears more realistic.

(13.19, Table 13.4)

6. The student population in Punjab is expected to increase at a rate much faster than the likely growth of population. At present, while nearly 100 per cent children aged

Growth of
Students
Population,

about 6 years get enrolled in class I, a very small proportion of them — about 41 per cent, reaches class VI. The remaining 59 per cent drop out at various stages for different sociological reasons, including lack of aptitude for studies.

(13.26)

7. There is a good chance of reduction in the drop-out rate with the growth of the economy in the near future. Simultaneously Government will have to take adequate measures to improve the retention rate all along the line to educate and train people in good time to meet the future man power requirements of Punjab's economy which is expected to diversify into high technology areas in the coming years.

(13.27)

8. The population of Punjab which increased by 23.9 per cent in 1971—81, is expected to grow at a slower rate over the coming decades—21 per cent during 1981—91 and 19 per cent during 1991—2001 as assumed by us, i.e. at a compound annual rate of 1.92 per cent during 1981—91 and 1.75 per cent during 1991—2001. In contrast, the student population is expected to increase by about 4.1 per cent per annum during 1981—91 and by 3.4 per cent during 1991—2001.

(13.33, Table 13.7 and 13.8)

9. The state will have to step up markedly its expenditure on education not only to cope with the increasing student population but, simultaneously, to bring about the much needed qualitative improvement in its educational standard, which will include a real rise in teachers' salaries, expansion of facilities, such as building, furniture, equipment and items of teaching aid, and improvement in supporting educational facilities, such as scholarships, libraries, sports and other day-to-day conveniences. Most of the existing institutions—especially at the primary and middle levels—lack these facilities.

(13.38-13.39)

10. The Punjab Government spent Rs. 137.7 crores as revenue expenditure on education in 1980-81. Capital expenditure — under the combined head of Education, Art, Culture, Scientific Service and Research — was just Rs. 1.1 crores. The State Government's share in the total expenditure on education forms about 82 per cent, the balance being contributed by such agencies as the Central Government, University Grants Commission and the Universities.

(13.35—13.37)

11. Average per student expenditure increases sharply with the level of education. The share of the recurring cost of teaching i.e. salaries, in the total is very high, especially at lower levels of education, leaving little for maintenance, scholarships, library, etc., and for capital expenditure on such items as building, furniture and equipment.

(13.40)

12. There is need for real raise in teachers's salaries to attract better talent to the teaching profession. It may be desirable to raise their grades, brining them on a par with some suitable grade in the existing government hierarchy. This will entail an extra financial burden on the state exchequer.

(13.41)

13. We have, in our estimates, provided for a 4.5 per cent per annum real rise on this account during 1981—91 and 5.4 per cent during 1991—2001.

(13.42)

14. There is need to rationalise the composition of per student expenditure so that the share of teachers' salaries in the total declines, with a corresponding rise under non-teacher recurring expenditure and capital outlay. This means that while teachers' salaries will rise in absolute terms, expenditure under other heads will have to rise at a much faster rate.

(13.45)

15. A good number of schools in the state lack basic facilities such as a school building and furniture. There is an urgent need to provide these facilities, for which an estimated Rs. 131 crores was needed in 1983. In addition, there is a pressing need for setting up certain state level institutions such as :

The Capital Backlog.

- An autonomous Institute of Educational Studies and Development.
- Colleges for further education.
- Centres for educational technology and Learning Resource Centres.
- Some other support systems, such as non-formal education, open schools, guidance and counselling and educational technology.

On rough estimates, the creation of these institutions would require an investment of Rs. 60 crores to be phased out over the next 10 years in a progressive manner.

(13.47)

16. In addition, the impending decision to introduce the 10+2 system in the state, and the need for introducing and strengthening vocational courses at the +2 level, will place an extra financial burden on the exchequer. The existing Industrial Training Institutes have a total capacity to train about 12,000 students in para-engineering vocations. There is need to train students in other vocations, too, such as para-medical, agriculture, commerce and trade to reduce the growing number of the white-collar unemployed, and train young people in good time to fill in the gap of managers and technicians that society is likely to face in future years.

(13.51—13.53)

17. In addition, as suggested by the Kothari Commission, about 10 per cent of the educational institutions up to the secondary level should be run as 'model institutions', to set some sort of a 'standard' in teaching. Expenditure on all such schemes has been taken care of.

(13.61)

18. The present teacher-student ratio in Punjab appears passable, except at the primary and middle levels, where the existing number of teachers is much larger than what the 'actual' number of students would normally require. This can be examined. If found to be so, there will be no need to recruit new teachers for a few years while the number of students grows. This will amount to a saving which can possibly be utilized to clear the capital backlog at an early date.

(13.64, Table 13.12)

Future Ex-
penditure.

19. The requirement of expenditure for education, at the 1980-81 prices level, will be of the order of Rs. 453 crores in 1991-92 and Rs. 1,181 crores in 2001-02.

(13.69)

20. Assuming that the external agencies will continue to contribute 18 per cent of this expenditure, the share of the State Government in the total will be of the order of Rs. 371 crores in 1991-92 and Rs. 968 crores in 2001-02, the share of capital expenditure being Rs. 17 crores and Rs. 55 crores respectively. Thus, the revenue expenditure by the state on education will rise from Rs. 137 crores in 1980-81 to Rs. 355 crores in 1991-92 and Rs. 913 crores in 2001-02, exceeding resource availability at the present rate of revenue allocation.

(13.70)

21. Considering the present low rate of revenue raising in Punjab, it appears that the course to be adopted to bridge this resource gap will have to be additional revenue mobilisation without disturbing the share of education in total revenue expenditure.

(13.74)

22. In Punjab's revenue receipts rise to 16.3 per cent of NDP by 1991-92 and 21.6 per cent by 2001-02—proportions which befit a developed state like Punjab, and do not look difficult to achieve either — all the resources needed for the development of the State's educational system can be provided. Simultaneously, this single step would yield proportionately higher resources for other competing schemes and sectors.

(13.74)

23. If, however, the growth of Punjab's economy turns out to be higher than 6.6 per cent, the resource gap will be correspondingly lower, and can be managed with a relatively small rise in the revenue—NDP ratio, than what has been suggested above.

(13.82)

24. There is a pressing need to step up capital expenditure for education, from the level of less than Rs. 1 crore in 1980-81 to Rs. 17 crores in 1991-92 and Rs. 55 crores in 2001-02. In addition, there is need for an expenditure of Rs. 191 crores for wiping out the capital backlog and the creation of certain institutions.

(13.85)

25. The capital budget of the state will have to provide for a rise in its receipts for educational purposes through the usual sources—loans from the public, loans from the Central Government, bonds, etc. in addition to generating a higher surplus under the revenue account and diverting it to finance such capital schemes. Further, individuals, industrial houses, charitable trusts, etc., can be induced and invited to finance specific educational projects.

(13.85-13.86)

26. Altogether, finances are not expected to pose any problem for the development of the educational system in Punjab. The economy is poised to achieve a sizeable growth and there is considerable unexploited potential capable of yielding the requisite funds. The total expenditure of Rs. 371 crores for education in 1991-92 and Rs. 968 crores in 2001-02, as visualised by us, represents 4.3 per cent and 5.7 per cent of the likely NDP in the two respective years. This will still be lower than the national norm of 6 per cent found in most of the developed countries.

(13.87)

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DOC. No. 3811
Date: 13/8/89

22235 DSC—Govt. Press, U.T., Chd.

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