CHAPTER IV

METHODS AND TECHNIQUES

Systematic research has been a most potent instrument in all types of progress in the history of mankind. Barr, Davis and Johnson state, "Growth of research in education has been one of the outstanding characteristics of cultural progress during the present century". The expansion of elementary education caused on account of implementation of the Directive Principle of Indian Constitution has not only posed a great challenge but also has created multifarious problems to both the educationists and the educational administrators. The solution of these problems lies in conducting systematic research on scientific basis in the field of elementary education.

METHODS

4-1. In the present study a combination of Historical and Descriptive methods has been used. For the collection of data, the researcher not only visited the various libraries in the Punjab and other states of the Indian Union but had also approached the Central Government Offices and organizations, libraries of the National Council of Educational Research and Training (N.C.E.R.T.), New Delhi, and the Asian Institute of Educational Planning and Administration, Delhi.

In order to trace the history of educational administration, Annual Reports on Education published by the State Department of Education, historical records on education published by the Ministry of Education, Government of India, Statistical abstracts

Descriptive Method has been employed in order to study the various problems of elementary education at different levels. In this study two pronged approach—macroscopic and microscopic has been adopted. For extensive study the whole state of Punjab and for intensive study only two districts of the Punjab, have been taken. 

**Sample**

4-2. In order to arrive at valid and reliable conclusions both the extensive and intensive approaches have been followed in the present study. For intensive work, two districts of the Punjab, namely, Bhatinda and Ludhiana were purposely chosen, since there was no change in their boundaries on account of the re-organization of the state. All the twenty nine blocks in these two districts were taken for intensive study. However, responses were received only from 25 blocks. For extensive study two blocks from each district of the Punjab state were chosen at random (by drawing lots).

In the two districts chosen for intensive study, there were 1198 primary schools and 159 middle schools as stood on 15th May, 1967. In order to ensure fair representation, a random sample of 300 schools on 'proportional probability' basis was drawn out of these schools for the study of the problems at the elementary school level. It covered all types of schools such as boys' schools, girls' schools, and co-educational schools from all areas of the two chosen districts.

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1. List of Educational Institutions in Punjab (15 May, 1967)
Punjab Education Department, Punjab Govt. Press, Patiala, 1967, pp. 91-117.
The number of middle schools chosen was 60 and that of primary schools was 240. The primary schools' sample was nearly 20 percent of the total number of these schools and the middle schools sample was nearly 40 percent of the total number of middle schools. Since the number of middle schools was quite small it was thought desirable to ensure a fair sample to take a higher percentage of these middle schools than the percentage of the primary schools.

**TOOLS EMPLOYED IN THE STUDY**

The various tools used in this study were:

1) A diary for the Headmasters of primary and middle schools.

2) A diary for the Block Education Officers.

3) A Questionnaire for the Block Education Officers.

4) A Questionnaire for teachers, headmasters, Block Education Officers and educationists.

5) Two proformas for the Block Education Officers.

6) An Interview schedule for the educational administrators at the district and higher levels of administration.

The details of these tools are given below:

**PREPARATION OF THE DIARY FOR HEADMASTERS**

4-3. The researcher had interviews with 50 heads of primary and middle schools regarding the problems they were confronted with in their daily routine. Ten senior lecturers from the State Institute of Education, Chandigarh and Government College of Education, Chandigarh were consulted in this connection. The problems pointed out by these persons were compared and analysed and thus a diary was framed for the heads of primary and middle schools. The researcher gave a try-out to this diary upon 50 heads in the field but could get very limited number of responses. It was then reframed and again given a try-out. The responses were still poor. The researcher was informed
by the respondents that the diary required further simplification and a framing in a manner that it could be filled without putting much demand on the time of the respondents. This led the researcher to reframe the diary once again. Its form was now much simplified and the respondents were required to give only very essential information. Since this form of diary was able to get 96 percent responses on a try-out of 50 heads it was finally adopted for the study. It may be seen that this form of diary has different columns for reporting the problems, for decisions taken to solve the problems and the interference, if any, in taking decisions. This frame of diary was finally administered to 300 heads of primary and middle schools. The diary was required to be filled each week on Saturdays. The period during which the diary was required to be filled in by the heads was three months.

**PREPARATION OF THE DIARY FOR THE EDUCATION OFFICERS**

At the block level another diary was evolved after a thorough preparation and try-out. The B.E.O.'s, D.E.O.'s and C.E.O.'s were consulted for evolving this diary. It was given for a try-out to ten B.E.O.'s, two officers at the district level and one at the Directorate level and then a final shape was given to it. This diary had three parts. The first part mentioned the procedure of filling the diary and there were different blank columns to report the problems, decisions taken on the problems and interference from any quarter. The second part of the diary was for reporting the problems already faced by the respondents in the past. The third part was framed for reporting persistent problems in elementary education. The period allotted for the filling up of the diary was

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1 Appendix A
2 Appendix B
PREPARATION OF THE QUESTIONNAIRES

4-5. In order to conduct a survey of the administrative and financial problems at the block level, Questionnaire I was prepared and administered to all the B.E.O.'s in the Punjab state except the B.E.O.'s of districts Bhatinda and Ludhiana who supplied the diary data. This questionnaire was framed in consultation with 10 primary school teachers, 10 B.E.O.'s, 2 D.E.O.'s and one Assistant Director in the state of Punjab. Questionnaire II was prepared in consultation with teachers, lecturers of training schools, lecturers and senior lecturers working in the State Institute of Education, Chandigarh to enquire about the qualitative improvements in the elementary education. This questionnaire was administered to 100 educationists including senior lecturers in the State Institute of Education, Chandigarh, principals of junior basic training schools, principals and senior lecturers of teachers' training colleges, 150 B.E.O.'s, 300 headmasters and 300 teachers. In this questionnaire the respondents were asked to give their opinions regarding the qualitative improvements in elementary education on these aspects—curriculum, textbooks, teachers, school-community relationships, administration, supervision, physical facilities and evaluation of the students. They were asked to give their opinion on a five point scale—from much improvement to deterioration.

PREPARATION OF TWO PROFORMAS FOR THE B.E.O.'S

4-6. Two proformas were developed for collecting the factual data regarding the progress of education since 1950 and also to enquire about the financial accountability in the blocks. Through

1 Appendix C
2 Appendix D
proforma No. I the data regarding contingencies, grants and expenditure were obtained. The proforma No. II specially made an enquiry about the expenditure incurred in the months of February and March by B.E.O.'s together with the dates when the various types of grants were received by the B.E.O.'s.

PREPARATION OF INTERVIEW SCHEDULE FOR THE EDUCATIONAL ADMINISTRATORS AT THE DISTRICT AND HIGHER LEVELS OF ADMINISTRATION

4-7. An interview-schedule for the educational administrators at the district and higher levels of administration was prepared. It consisted of open-end questions so that the opinions of administrators could be obtained regarding the various aspects of administration and financing of elementary education.

MEASURES ADOPTED TO ASSESS THE IMPACT ON THE QUANTITATIVE AND QUALITATIVE PROGRESS OF ELEMENTARY EDUCATION

4-8.

A- QUANTITATIVE

The impact of the administrative and financial problems on the quantitative progress of elementary education has been examined with respect to certain indicators. The indicators chosen for determining the impact on quantitative progress were as follows:

1) Enrolment of students in elementary education in the Punjab,

2) Enrolment of students in elementary education of the backward classes in the Punjab, and

3) Enrolment of students in elementary education in different districts of the Punjab.

About these indicators the factual data of the state were obtained from the government records and publications.

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Appendix E
Appendix F
Appendix G
Directly, it is very difficult to measure the qualitative aspect of education because of its complex processes and subtle influences. There are, however, indirect methods of measuring the qualitative aspect of education. In the present study this aspect was measured through the following indicators:

i) Curriculum.
ii) Textbooks.
iii) Teachers' Quality and their personal relationships.
iv) School and Community relationships.
v) Administration and Supervision.
vi) Buildings, Furniture and Equipment.
vii) Ancillary Services.
viii) Evaluation of the students.

About these indicators the second questionnaire, as reported earlier, was administered to the persons concerned and data were obtained.

The impact of the administrative and financial problems on the progress of elementary education is shown by the gap or divergence between the existing situation of elementary education with special reference to the above mentioned indicators of quantitative and qualitative progress of elementary education and the expected progress.

**ANALYSIS AND INTERPRETATION OF DATA AND DISCUSSION OF RESULTS**

The data obtained through the various tools and techniques were analysed and interpreted by applying simple arithmetical computation. The frequencies, weighted scores and percentages have been used most frequently in the analysis of the data in this study. The analytical data in tabular form are presented in the chapters following immediately.
In the last chapter the overall conclusions have been drawn. These conclusions have also been put in a conceptual framework. The components of this framework are four in number: (i) Structural, (ii) Relational, (iii) Cultural, and (iv) Procedural. It may be noted that these components have an affinity with the "PROBLEM MODEL" given in chapter II. The Structural relates to the institutions, the Relational to the superordinate and subordinate roles of the individuals in the hierarchical setting of the institutions, the cultural to the environment and the Procedural to the interaction between the institutions and the individuals. It may, however, be noted that the model given in Chapter II, has been outlined for the systematic analysis of the data. The components given above are to be used for the conceptualisation of the findings.

The significant difference between the components and the segments as referred to in Chapter II, is in the method of approach. The segments of the 'Problem Model' were drawn for analytical description while the components of the theoretical framework were developed for synthetic study of the findings.

It may be pointed out that the components have been studied by constructing "concept pairs" making use of Parsons' views regarding "Pattern variables" of role definition. The "concept pairs" in this study are entirely different from the "Pattern variables" of Parsons'. The "concept pairs" have been developed by the investigator for the synthesis purposes for this study alone. These "concept pairs" are

formulated as under:

Components Concept Pairs

1. **STRUCTURAL**

   1) **BUREAUCRATIZATION** Versus **PARTICIPATIVE ADMINISTRATION**— that is to administer with well-defined legalistic positions or to administer involving the full participation of the concerned persons in the administration.

   11) **CENTRALIZATION** Versus **DECENTRALIZATION**— that is the concentration of powers in the hands of a few at the top or diffusion of powers at all levels.

2. **RELATIONAL**

   1) **ROSSISM** Versus **PROFESSIONALISM**— that is to have an attitude of dominance or to have a feeling of associative functioning.

   11) **CONFLICT** Versus **COOPERATION**— that is to be critical and opposed to others' opinions or to give due respect and consideration to others' opinions.

3. **CULTURAL**

   1) **INDIVIDUALISM** Versus **COLLECTIVISM**— that is, to serve self-interest or to serve the interest of the institution or the organization to which one belongs.

   11) **LETHARGY** Versus **LABOUR**— that is to discharge responsibilities in an easy going manner or to labour hard in doing one's job.

4. **PROCEDURAL**

   1) **DEPENDENCE** Versus **INITIATIVE**— that is to follow the orders blindly or to take one's own decision.

   11) **ROUTINE** Versus **INNOVATION**— that is to remain tied down with the prescribed procedures or to apply individual intellect to revise the procedures.

In the end it may be mentioned that in this study an analytic-synthetic approach has been followed. The different persons involved in the administration of elementary education have formed the nucleus of the study. Most of the data were obtained from them.
through the use of a number of tools and techniques described above
and were put to an analytical treatment which was followed by discus-
sion. The discussion led to conclusions. The conclusions were
further put in a theoretical framework to have an overall picture
of the environment in which the system of elementary education in the
Punjab is functioning.

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