CHAPTER IV

METHOD AND
PROCEDURE
METHOD AND PROCEDURE
DESIGN OF THE STUDY

The present study involves summative evaluation. It is purported to evaluate the effectiveness of vocational education programmes and practices in the senior secondary schools of Chandigarh. The purpose is to find out the present situation of the number of vocational courses offered, infrastructural facilities, and instructional facilities available, problems faced by the students, teachers and administrators, and also to find out the benefits of vocationalization of education.

Descriptive survey method was adopted to conduct the study which involved collection of data through administering Seven tools and techniques such as (i) Questionnaire for on-going (present students) (ii) Questionnaire for passed-out students (iii) Questionnaire for teachers (iv) Questionnaire for administrators (v) Interview-schedule for teachers (vi) Check-list for students and (vii) Inventory for on-going (Present) students.

The study was designed to collect data from the students, teachers, and administrators. Data was collected from the Government Senior Secondary Schools of Chandigarh and the students passed-out from these schools were followed-up at their residence. The figurical representation of the design is given in fig 4.1 as follows:

FIG. 4.1 DESIGN AND TOOLS OF THE PRESENT STUDY
Hypotheses

The hypotheses for the present study were formulated on the basis of related literature, intuitive understanding etc. To achieve the objectives set forth for the study and to evaluate the programme in the light of criteria formulated for the study, following hypotheses were formulated:

I Vocational education is being effectively carried out in the senior secondary schools of Chandigarh as evaluated by Students.

II Differentials would be there in preferences of students for various vocational courses.

III Gender differentials would be there in opting for different vocational courses.

IV Gender differentials would be there in the evaluation of vocational education.

V Vocational education is being effectively carried out in the senior secondary schools of Chandigarh as evaluated by teachers.

VI Vocational education is being effectively carried out in the senior secondary schools of Chandigarh as evaluated by administrators.

VII Institutional differentials would be there with regard to the vocational maturity of students opting for vocational stream.

VIII Course-wise differentials would be there with regard to the vocational maturity.

IX Sex-differentials would be there with regard to vocational maturity.

X There would be gainful employment of youths who opted for vocational courses during 1991-92.
XI Differentials would be there in Job-placement of students opting for different vocational courses.

XII Sex-differentials would be there with regard to job-placement of students opting for different vocational courses.

XIII Differentials would be therein Job-satisfaction of students placed in different jobs.

Sample

Purposive Sampling technique was used for the selection of sample. The sample of the present study included (i) All the 11 senior secondary schools of Chandigarh under the vocational stream.

(ii) All the 565 students belonging to the 11 senior secondary schools of Chandigarh.

(iii) All the 56 teachers i.e. full-time and part-time teachers teaching in the above schools.

(iv) All the 11 Administrators from the schools covered by the study.

(v) Approximately 50 students who passed out successfully during the session 1991-92 were followed up under the present study.

The figurical representation of the sample is given in fig. 4.2 as follows:-
Tools used.

The present study was conducted with the help of four Questionnaires, one Inventory, one Interview schedule and One check-list.

1) Questionnaires for students, teachers, administrators and passed out student.

The present study included 4 Questionnaire i.e. for (i) students, (ii) teachers (ii) Administrators (iv) Passed out students. Separate questionnaires were used for each of the above samples because of their different roles in the functioning of the vocational education programme.

Questionnaires for students, teachers and administrators were developed at a national level workshop (Misra, 1986). They were finally modified and finalised by the investigator and the supervisor of the present study after consultations with the experts in the area. All the questionnaires are in English (Appendix: )

For scoring purposes, frequencies with respect to each item of the questionnaire for students, teachers and administrators in two category responses of 'yes' 'no' were counted.

1) Questionnaire for students

It consisted of 28 items related to vocational education programme and one item was required to give suggestions for further improvement of the vocational education programme.

2) Questionnaire for teachers

The questionnaire for teachers consisted of 31 items. It consisted three parts. The first part of consisting of 27 items was related to the teachers themselves. The second part of the questionnaire was consisting of 22 items was concerned about the vocational students. Third part of the questionnaire consisting of 30 items was related to their vocational curriculum.
3) Questionnaire for Administrators

Questionnaire for Administrators consisted of 34 items. It contained the information regarding the institution about the vocational course, infrastructural and instructional facilities, teachers, management and other miscellaneous information.

4) Questionnaire for passed-out students

Questionnaire for Job-placement by the vocational students was originally framed in English by the investigator. It consisted of 25 items. It contains the information regarding the passed-out students of vocational stream, information regarding their vocational course, job-placement by the vocational students and job satisfaction of the vocational students. It was constructed to follow-up the passed-out students, which benefits to the placement.

Construction of the Questionnaire

In order to construct a valid tool for analysing the problem in hand, the investigator studied the relevant literature which gave her insight into the problem. To formulate items for the questionnaire, the literature on related studies regarding the vocational education programme and literature on construction of research tools were consulted. Five experts in the field were also consulted with regard to the suitability of questions framed and to validate the questionnaire. The questionnaire was tried on representatives of the population to be studied before the final draft of the questionnaire (App:10).

The questions in the questionnaire were closed questions with two category responses, i.e 'yes' or 'No' responses.

Interview schedule for Teachers

The interview schedule for teachers was also developed at a national level workshop (Misra, 1986). It consisted of 50 items related to the curriculum, about teachers themselves, infrastructural facilities and instructional facilities. It was used to fill the gaps left
by the questionnaire. And to have a deep insight into the actual functioning of vocational education programmes.

The scoring of the interview schedule was done by adding up the frequencies with respect to each item into category responses of 'Yes', 'No'.

**Check-list for students**

The check list of students was also framed in the same national level workshop (Misra, 1986). It consisted of 13 items and gives information about the vocational education programme. It fills up the gaps left by the questionnaire so that no importance aspect is left out. Some of the items were included just to provide a check to the answers given to those items in the questionnaire by students, administrators and teachers.

The scoring of check-list was done by adding up the frequencies as per instructions of the author.

**4) Career Maturity Inventory**

The Career Maturity Inventory (CMI) by Gupta, 1989 It is an adaption of CMI by crites (1973, 1974a, 1974b) has been used to assess the career maturity of the students. It provided two types of measures: the attitude scale and the competence test.

**The Attitude Scale**

The attitude scale contains 50 items. It elicits the feelings, the subjective reactions, the dispositions that the individual has toward a career choice and entering the world of work. Five attitudinal variables being surveyed by Attitude Scale are:

i) Decisiveness in career decision making
ii) Involvement in career decision making.
iii) Independence in career decision making.
iv) Orientation to career decision making.
v) Compromise in career decision making.
A test-retest reliability ranged from .78 to .82 was found, this scale also has a high content and construct validity.

In order to provide maximum consistency in scoring for career maturity Inventory the scoring stencils were used for easy and accurate scoring separately. In part I of Inventory i.e., attitude scale the correct responses of each item is visible in the circle of scoring stencil. If marked responses are visible in the circle or scoring stencil, the responses are treated as correct and for one correct response, one mark is assigned. The total number of correct responses in this test is known as the raw scores of test I.

The competence test

The competence test measures the information, comprehension and problem solving competencies which are critical to realistic career choice.

In each item of the competence test, there is a short description of a person followed by four statement about that person. There are 20 items in each part of the original competence test. The five parts of the competence test are as under:

i) Self appraisal (Knowing yourself)
ii) Occupational information (knowing about jobs)
iii) Goal selection (choosing a job)
iv) Planning (looking ahead)
v) Problem solving (what should they do?)

Split half reliability of this test range from .54 to .88. This test has a content and construct validity.

In second part i.e. competence test, the correct responses for each of the five parts are also visible in the circle of scoring stencil. A correct response is one for which the scoring stencil alternative are only marked. One mark is assigned for each correct response.
area wise and the total is known as the raw score of that subtest. An omitted marked item is treated as a wrong response and '0' score is assigned to it.

Procedure of data collection

Administration of questionnaire for Administrators and Teachers

For the collection of the data, the investigator personally visited all the schools covered by the study. Administrators and teachers were given questionnaires to fill up. Some of the administrators and teachers filled up at the same time. While others took few days to fill up. The investigator visited them frequently to obtain the questionnaires from them.

Administration of Interview schedule for teachers

Interview of the teachers was conducted in each of the schools on the basis of the interview schedule meant for that purpose. All the teachers were very cooperating with the investigator. Questionnaires were given to fill up along with the interview schedule.

Administration of Questionnaire to on-going students

For the collection of data from +2 class, the investigator took the permission of the heads of the institutions and the teachers. To establish rapport with them the general purposes of the vocational education programme and the purpose of investigator to conduct the study were explained to them. With the co-operation of teachers, the questionnaires were distributed to the students. The instructions were given to the students by the investigator. Then the students were first asked to fill in the columns giving their particulars such as name, class, sex, their vocational course etc. Each question was explained so that they give accurate information. The students were assured that their answers would be kept confidential and would not be exposed to anyone.

Administration of check-list to the students

After the completion of the questionnaire by the students, they were given the check-list and the instructions to fill them up. The investigator recorded the actual conditions
with regard to the functioning of the vocational education programme on the basis of items were included in the check-list.

Administration of the career-maturity Inventory

(i) Attitude scale

The Attitude scale was administered on individuals in groups. Students were told to indicate their feelings about each item rather than attempting to discern a 'correct' answer. The total administration time for the scale was about 30 minutes including time for collection and distribution of booklets and time for completion of biographical data on the answer sheet.

(ii) Administration of the competence test

The attitude scale and competence test as applicable equally to males and females. The competence test consists of five parts, each of which assesses a component in the career decision making process. Students were told to answer the questions on the basis of information contained in the question items using their knowledge and deductive abilities. The total administration time required for all parts was approximately one and a half hour including time for material distribution and collection and completion of biographical information on the answer sheet for this test. The investigator also ensured that the students posed the required awareness in marking the answers.

Administration of the Questionnaire to the passed-out students

The investigator followed-up senior secondary students of vocational stream in Chandigarh. The data collected from the students who passed-out successfully from senior secondary schools of Chandigarh in the session-1991-92 and who had either taken up employment or had joined colleges etc for higher studies. For collecting the data, investigator went to the Government senior secondary schools of Chandigarh. From there, she collected the residential addresses of the students. Then she went to the door-steps of the students to
collect the data. She experienced tremendous difficulties while collecting the data. Some of
the students shifted their residence which further enhanced the beat of the investigator. The
investigator went to the homes of the students with her friends and parents. They were
distributed the questionnaires and explained each item in detail. Some of the questionnaires
were obtained after sitting with the students for sometime and the remaining ones after a few
days.

Statistical Analysis

In order to arrive at meaningful conclusions, the frequencies with regard to
each item of questionnaire for students, teachers, administrators and passed-out students
were added up separately for the sample drawn from Chandigarh. The frequencies were
converted into percentages. Then the significance of difference between percentages was
calculated. Besides, other needed descriptive statistics t-values, graphic representation etc.
were used.

The data regarding the evaluation of vocational Education stream in the senior
secondary schools of Chandigarh would be analysed in eight different chapters ahead
Chapter 5 deals with the interpretation of data regarding the 'Descriptive survey of students
opting for vocational stream'. Chapter 6 is planned to analyse and interpret the data regarding
the 'Evaluation of Vocational Education by Students'. Chapter 7 deals with the 'Evaluation of
Vocational Education by Teachers'. Chapter 8 is planned to interpret the data regarding the
'Evaluation of Vocational Education by Administrators'. Chapter 9 deals with the
interpretation of data regarding the Vocational maturity of students. Chapter 10 enumerates
the 'Job-placement of students opting for vocational stream'. Chapter 11 deals with the
Difficulties faced and suggestions given by the Evaluators'. Chapter 12 deals with the
'Evaluation of Vocational Education by the Investigator'. Chapter 13 summarises the results
and conclusions.
Table of codes used in the Study.

Table no. 4.1

Table no. 4.1 shows the names of the institutions for code no. 1 to 11 used in chapter 9 as quoted below:

<table>
<thead>
<tr>
<th>Code no.</th>
<th>Names of the Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government Senior Secondary School Sec-23, Chandigarh</td>
</tr>
<tr>
<td>2</td>
<td>Government Senior Secondary School, Manimajra Town, Chandigarh</td>
</tr>
<tr>
<td>3</td>
<td>Government Senior Secondary School Sec. 10, Chandigarh</td>
</tr>
<tr>
<td>4</td>
<td>Government Senior Secondary School, Sec-35 Chandigarh</td>
</tr>
<tr>
<td>5</td>
<td>Government Senior Secondary School Karsan, Chandigarh</td>
</tr>
<tr>
<td>6</td>
<td>Government Senior Secondary School Sec-40, Chandigarh</td>
</tr>
<tr>
<td>7</td>
<td>Government Senior Secondary School Sec-8, Chandigarh</td>
</tr>
<tr>
<td>8</td>
<td>Government Senior Secondary School Sec-20B, Chandigarh</td>
</tr>
<tr>
<td>9</td>
<td>Government Senior Secondary School Dhanas, Chandigarh</td>
</tr>
<tr>
<td>10</td>
<td>Government Senior Secondary School Sec-27, Chandigarh</td>
</tr>
<tr>
<td>11</td>
<td>Government Senior Secondary School Sec-18, Chandigarh</td>
</tr>
</tbody>
</table>

Table no. 4.2

Table no. 4.2 shows the names of the vocational courses for Code no. 1 to 20 used in chapter 9 as quoted below:

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Name of the vocational courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic Electrical Technology</td>
</tr>
<tr>
<td>2</td>
<td>Basic Electronics Technology</td>
</tr>
<tr>
<td>3</td>
<td>Refrigeration and Air-Conditioning</td>
</tr>
<tr>
<td>4</td>
<td>Automobile Technology</td>
</tr>
<tr>
<td>5</td>
<td>Structure and Fabrication</td>
</tr>
<tr>
<td>6</td>
<td>Dress Designing and making</td>
</tr>
<tr>
<td>7</td>
<td>Textile Designing</td>
</tr>
<tr>
<td>8</td>
<td>Health Care and Beauty Culture</td>
</tr>
<tr>
<td>9</td>
<td>Hotel Management and Catering</td>
</tr>
<tr>
<td>10</td>
<td>Bakery and Confectionery</td>
</tr>
<tr>
<td>11</td>
<td>X-Ray technology</td>
</tr>
<tr>
<td>12</td>
<td>Ophthalmic technology</td>
</tr>
</tbody>
</table>
13. Medical laboratory technology.
14. Auxiliary Nursing medical
15. Computer Technology.
17. Banking
19. Life Insurance course (LIC).
20. General Insurance course (GIC).