CHAPTER – III

RESEARCH DESIGN OF THE STUDY

Proper designing, planning and its implementation is the key of success of research work. Plan of a research study entails an overview of the total layout including a consideration of how the work is to be executed. It is the stage of decision-making, divergent thinking, and of conceptual framework. It is at this stage that crucial decision are made for the accomplishment of the aims of the study such as, what measures of gathering data are to be applied, what kind of data pertinent to the study are to be collected, defining of the principal terms used and finally how it is to be analyzed. In fact, successful completions of the study are not possible without proper planning, designing, its implementation, and procedure as well as process involved in it. To be able to formulate question or concepts for study, one must be thoroughly familiar with what is established knowledge in the area. Defining concepts into operational terms, one need to know statistical methods- stating hypotheses and their alternatives, experimental design, estimation theory and the other techniques used for planning and collecting data. As it is worth mentioning that successful educational research involves both a planning phase and production phase. Statistics in its genuine forum play it role in the planning phase rather than the production phase of research. In this chapter, the investigator has given the description of methodology adopted for conducting the present study to be called as "design of the study".
Methodology

After the investigator has selected a problem for study and has become thoroughly familiar with its possibilities through a careful bibliographical survey of the field represented, it is necessary to determine what methods or techniques for collections of data are more appropriate in solving the problem or in verifying hypothesis formulated. Basically, no distinction is made between the terms as methods, techniques and procedures, in the interest of simplicity and variety of expression. No attempt has been made to characterize one method as more important than another, since the purpose to be served and the condition to be met present study was carried out with a broader goal in view. So the best suited method for this study was considered "The Normative Survey Method".

Generally, the following methods are in use in conducting the researches in the field of education:

1. Historical Method,
2. Experimental Method,
3. Normative Survey Method,
4. Casual-Comparative Method, or Ex Post-facto method, and
5. Case Study Method.

As already it has been mentioned that this study is based on "The Normative Survey Method", so, it seems to be necessary to mention the details regarding this method. Other methods seem not too much useful in this type of research. So, no attempt is being made to explain the methods not used. However, normative survey method is presented in a significant manner as below.
The Normative-Survey Method

Normative-Survey research is directed towards ascertaining the prevailing conditions. It seeks to answer the question, "What are the real facts with regards to the existing conditions". The normative-survey approach is appropriate wherever the objects of any class vary among themselves and one is interested in knowing the extent to which different condition are obtained among these objects.

The Compound adjective "normative-survey" is applied to this method in order to suggest the two closely related aspects of this kind of study. The word "Survey" indicates the gathering of data regarding current conditions. The word "normative" is used because surveys are frequently made for the purpose of ascertaining what is the normal or typical condition, or practice.

It is the method of research which concerns itself with the present phenomena in terms of conditions, practices, beliefs, processes, relationships, or tends in variously termed as 'descriptive survey study'. 'Normative' or 'tend' study or survey.

Normative-Survey Research and practical Needs

One may be prompted to ask whether norm at which we survey data solve problems. To this it must be replied that once problems of a practical nature are not solved directly by data of any kind. The solving of problems is a distinctly psychological process. Solutions do not lie in data; they result from thinking, with the help of the increased insight, which grows out of a study of data. The normative-survey approach fits into the total research scheme in several ways. If one watches the development of research in some new Field through a series of stages, he will note that the early approach represent a sort of general "getting acquainted" with the field. How far does it extend? What are the
phenomena like? What are the classes or kinds into which the phenomena can be put? This survey method is always, appropriate when information concerning current conditions is desired in any field, however well explored, in which there are changes of condition or changes or population frequency from time to time.

**Kinds of Normative-Survey Research**

The normative-survey method of research finds expression through a variety of techniques. There are different kinds of sources for these facts, so there are many procedures. Which have been developed to meet the needs of different purposes and conditions? In all, six different types of normative-survey research are recognized, namely:

2. Questionnaire Inquiries,
3. Documentary Frequency Studies,
4. Interview Studies,
5. Observational Studies, and
6. Appraisal-Procedures.

**1. Survey-Testing Procedures**

By survey testing is meant simply the testing of a group of children (or adults) to ascertain the prevailing conditions with respect to the traits measured by the test perhaps the most common example of normative survey research in education is survey testing. There is no sharp dividing line between normative survey research and historical or experimental or causal-comparative research, and the treatment of survey testing and of the other techniques. The particular manner in which such a technique will fit into a research study depends upon the particular problem that is chosen and the way in which it is to be treated.
2. **Questionnaire Procedures**

A questionnaire is a form, which is prepared and distributed for the purpose of securing responses to certain questions. Generally, these questions are factual, designed to secure information about conditions or practices of which the recipient is presumed to have knowledge. The questionnaire is an important instrument in normative-survey research, being used to gather information from widely scattered sources. The questionnaire procedure normally comes into use where one cannot readily see personally all of the people from whom he desires responses or where there is no particular reason to see them personally.

3. **Documentary-Frequency Procedures**

This procedure of normative-survey research, like historical research, deals with records, which already exist. The fact that one works directly from documents does not mean that he avoids all problem of collecting and selecting data. Determining what characteristics to count, and defining them, is important parts of this part of this type of work: in fact, they may he the most crucial part. Textbook analyses, analysis of larger bodies of literature analysis of assembled specimens, these all are broadly sub-division of this procedure, and can be used in the conditions well suited to particular technique or procedure.
4. Interview Procedures

In the interview for investigation purpose the research worker is gathering data directly from other in face-to-face contacts, as contrasted to most of the procedures already discussed. Several kinds of facts can be secured only from other people—for example, many facts of personal history, of certain personal habits and characteristics, of family life, opinion, beliefs etc. The interview enables the worker to follow up leads and take advantage of small clues; in complex material where the development is likely to proceed in any direction, no prepared instrument can perform the task. Again, the interview permits the interviewer to gain an impression of the person who is giving the facts, to form some judgment of the truth in the facts, and to "read between the lines", things that are not said.

5. Observational Procedures

Observation is recognized at once as the most direct means of studying people when one is interested in their overt behavior. In an interview people may tell what they think, they do, but this is often different from what they really do, for they are not generally accurate observers of themselves. Direct observation of behavior has only recently come to be looked upon as a scientific procedure, infect, great many scientists would at the present time express serious misgivings as to the possibility of anything "objective" coming from such a method.

As the technique of direct observation has been refined, the tendency
has been to restrict the data to a limited (although possibly very
complex) characteristic of behavior that could be identified readily by
one trained in the work.

6. Survey Appraisal Procedures

Appraisal is a form of classification or scaling according to
subjective values. If an instrument is used which makes the procedure
relatively objective, the instrument must have been calibrated in terms
of human judgment when it was constructed. It is concerned primarily
with human values and secondarily with the physical attributes to
which these values are, somewhat ephemerally, attached. Appraisal
procedure are divided into two groups for convenience in treatment, the
first group involving direct judgments, and the second group being more
objective in immediate from, but involving of judgment in the
preparation of the instruments or the selection and treatment of the
factors which are represented.

All these methods are directed toward ascertaining what the
prevailing conditions are, and how prevalent they are. The range of
studies coming within the scope of normative-survey investigations is in
wide demand by practical workers. It is however, a basic type of
approach in quantitative research, and all of the various techniques
which it utilizes are likely to be employed as component steps in the
more complex types or research, such as the experimental method, and
the genetic, case study, correlation, and other methods which emphasis
relationships.
Research Design in brief

In the present research work it was proposed to carry on an analytic study about the development of primary education under DPEP in district Tehri Garhwal of state of Uttarakhal. For this purpose normative research method with survey test procedure has been adopted. Since the prevailing status of DPEP in district has to be assessed per objective of the study.

Population

In the district Tehri Garhwal the DPEP has been started in all the parishdiya primary schools, about 1000 in number. These schools constituted the population of study. These schools are situated in all the Nyaya panchayats of nine Blocks of District.

Sampling Procedure

To conduct the present study ten percent of the total primary schools of the every block were selected for the sampling purpose. The selection of the school is done from every Nyaya panchayat of each Block so that it may reflect the complete reflection of the population. The number of such schools taken for study is 100 (10% of population), and 250 Teachers/Shiksha mitra /shiksha acharyas in these schools are selected by random sampling method and 50% member of Block Education Committee and all the 25 members of District Education committee are also taken in the sample of study.

Actual Structure of Sample

Investigator covered following actual structure of the sample

<table>
<thead>
<tr>
<th>Primary schools in No.</th>
<th>Teachers of primary school in No.</th>
<th>Vidhya Kendras in No.</th>
<th>Acharyaji of vidhya Kendra in No.</th>
<th>Members of Block Education Committee</th>
<th>Members of District Education Committee in No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>250</td>
<td>20</td>
<td>20</td>
<td>135</td>
<td>25</td>
</tr>
</tbody>
</table>

(53)
**Procedure of collecting secondary data**

a. For obtaining secondary data regarding the study of enrollment and to evaluate programme of universalization of education total no. of students enrolled in primary school and total no of children of mentioned age group is collected from all the Nyay panchayat resource centers after compilation of data year wise Net Enrollment ratio N.E.R. is calculated by following method.

\[
\text{NER} = \frac{\text{Total No. of students in school of 6-11yrs.age group}}{\text{Total no of children of 6-11yrs.age group in served area of school}} \times 100
\]

NER of boys and girls calculated separately and tabulated in table forms as follows.

<table>
<thead>
<tr>
<th>Year</th>
<th>NER Boys</th>
<th>NER Girls</th>
<th>Total</th>
<th>Upliftment in NER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. For calculating enrollment and dropout rate under DPEP information was collected from D.P.O. Tehri Garhwal. As DPEP was a systematic programme, a separate system was developed by state project office to analyze the programme and E.M.I.S (Education Management Information system) was developed for this purpose, all the information regarding the dropout and enrollment of district in mentioned year are available in DPO collected and arranged in following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>Dropout Boys</th>
<th>Dropout Girls</th>
<th>Total</th>
<th>Decrease in Dropout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For obtaining data regarding enrollment and dropout in socio economic group like SC/ST and OBC year wise total no. of children in
district, their enrollment was collected from DPO Tehri Garhwal. Percentage of enrollment was calculated and out of school and percentage of out of school children was also calculated, then after calculation of percentages these were arranged year wise in following table.

Table for enrollment and dropout rate of (*** ) students

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollment</th>
<th>Percentage of enrollment</th>
<th>No. of children out of school</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of children</td>
<td>Enrolled children</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Caste SC/ST, OBC and Girls.

c. For studying the justification of opening new primary school and EGS under DPEP, year wise no. of schools & EGS opened and enrollment in these school was collected from respective BRC and data are tabulated as

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of School/EGS center established under DPEP</th>
<th>Enrollment</th>
</tr>
</thead>
</table>

**Tools Used For Collection of Data**

In the present study the primary and secondary data were collected by using following tools.

**(A) Information Scheduled**

An information Scheduled was prepared for collecting the informations (Secondary data). From offices of block resource centers, District project office (DPEP) i.e. Basic Shiksha Addhikari office and State Project office Dehra Dun. The information Scheduled covers the following aspects.

1. No of Schools/E.G.S./Vidhya Kendra opened under D.P.E.P.year wise.
2. Students Information: year wise (from 1998 onward) and Class wise enrollment, drop out, retained; in caste Categories (general, S.C., S.T., O.B.C)

3. Teachers Information: working male and female teachers in schools.

4. Infrastructure Information: Building constructions, Drinking water and other facilities.

5. Participation and cooperation of community: In terms of training and no of trained persons.

(B) Opinionnaire

For primary data collection work an opinionnaire was constructed

Tools for primary data collection

It is here important to mention that hundred percent enrollments, retention and achievement was the main objective of DPEP. And the teacher was main focus for quality improvement and retention. Thus to assess the attitude of teacher and their extent of satisfaction towards DPEP and its management opinionnaire was constructed, for constructing opinionnaire coordinators and experts working under DPEP were consulted by research scholar in consultation with his guide and supervisor, and few other experts working under DPEP.

Thus prepared opinionnaire was standardized for the purpose in following terms.

Stage1. Item Collection

The researcher went through the available literature and consulted his supervisor, five senior Principals and Five experienced teachers in framing the items of opinionnaire. Thus the opinionnaire contained of 50 items at first stage. (Attached in appendix- I)
**Stage 2. First try out**

First try out of the prepared opinionnaire was administered on 100 teachers working in DPEP covered primary schools. The responded opinionnaire sheets were scored item wise and was subjected for item analysis

**a. Computation of Facility Value of Items**

The scored opinionnaire sheets were arranged in decreasing order of scores and a chart were prepared the facility value for each item was calculated by using following formula. (Attached in appendix II)

\[
F.V. = \frac{R}{N} \times 100
\]

Where R is the No. of examinees who responded the item correctly and N is total No. of examinee who take the test.

Thus facility value for each item was calculated.

**b. Computation of discrimination index**

This index measures the ability of item to discriminate between the high ability group and low ability group.

\[
D.I = \frac{R}{N} \text{ of HAG} - 100 \frac{R}{N} \text{ of LAG}
\]

Thus D.I. values were calculated and noted to each item and a table was obtained.

From this table the items were selected bearing following values

Facility value 11 to 89

Discrimination index ± .25
Stage 3. Final Draft preparation

After selecting the items possessing the desirable Facility value and Discrimination index opinionnaire was reframed and final draft of the opinionnaire was constructed and administered on the sample of the study. (Attached appendix -III)

Procedure for Data Collection

First of all investigator visited to the block resource centers and noted down the relative information from the office in the information Scheduled. Then he made visits to District project office of Tehri Garhwal and State Project office Dehra Dun. After it he visited to the respective sampled schools and again the informations were noted from the school office record and some information was verified. The teachers working in schools and V.E.C. members were contacted and opinionnaire were distributed among them and their opinion was sought.

The N.E.R. and drop out rates were calculated. This procedure was followed for collection of every relevant data in the study. However a few teachers were on leave and few V.E.C. members did not responded properly so these could not be included in the study.

Scoring and Tabularization of Raw Data

The collected raw data were scored as had been described in preparation of opinionnaire. Thus obtained raw scores and other informations (expressed in numbers) were tabularized appropriately. These were systematically arranged and following tables emerged out and subjected for statistical treatments in reference to the assumption.
<table>
<thead>
<tr>
<th><strong>Table No</strong></th>
<th><strong>Name of table</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Net enrolment ratio (NER) in District Tehri Garhwal</td>
</tr>
<tr>
<td>4.2</td>
<td>Total Enrolment and drop out rate under DPEP</td>
</tr>
<tr>
<td>4.3</td>
<td>Enrolment and drop out rate of S.C. Students under DPEP</td>
</tr>
<tr>
<td>4.4</td>
<td>Total enrolment and drop out rate of Girls Students</td>
</tr>
<tr>
<td>4.5</td>
<td>Enrolment and drop out rate of S.T. Students under DPEP</td>
</tr>
<tr>
<td>4.6</td>
<td>Enrolment and drop out rate of O.B.C. Students</td>
</tr>
<tr>
<td>4.7</td>
<td>Comparative year wise decrease in drop out of SC,ST,OBC And Girls</td>
</tr>
<tr>
<td>4.8</td>
<td>Mean Standard Deviation and T Value of male, female, Para teachers and teacher in general on their opinion about D.P.E.P.</td>
</tr>
<tr>
<td>4.9</td>
<td>Participation of V.E.C. members in training programme.</td>
</tr>
<tr>
<td>4.10</td>
<td>Description of construction works.</td>
</tr>
<tr>
<td>4.11</td>
<td>Year wise E.G.S. centers established under DPEP</td>
</tr>
<tr>
<td>4.12</td>
<td>Year wise opened new primary schools and enrolment covered to those children due to non accessibility of primary school.</td>
</tr>
<tr>
<td>4.13</td>
<td>Year wise vidhya kendras (EGS) and enrolment</td>
</tr>
<tr>
<td>4.14</td>
<td>Comparative mean values of community members in general, Block education committee members and District education committee members.</td>
</tr>
</tbody>
</table>
Graphical Representation

Graphically data are represented by using
- Bar diagrams
- Line charts

Use of Computer

Computer is a machine that can perform logical, mathematical and graphical operations perfectly and precisely. So computers are quite useful and helpful in solving calculation as well as proper planning and keeping records or work done in logical and systematic order. Although computer can perform better compared to human being in respect to fast calculation but it is controlled by human beings. So proper programming is necessary when we take the help of computer. Thus to perform work systematically and in planned way separate files are prepared by researcher for separate tables and graphs. Basically Microsoft Word and Microsoft Excel Software are used by researcher for current study. Separate files are also made by researcher for writing text as required.

Although all the calculations and graphical representations are made through computer but random rechecking is done through computer by using proper formula.
References


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