Chapter - 3

METHODOLOY

3.0 Introduction

The present chapter presents the plan and procedure of the study. It includes the Research Design, population, sample, tools of data collection, procedure for data collection, and statistical techniques used for data analysis.

3.1 Research Design

The descriptive survey method was employed for the status study of the DIETs.

3.2. The Population

All the functional DIETs of Rajasthan State constituted the population of the present study.

3.3. The Sample

The present study involved four types of samples – (i) sample of DIETs (ii) sample of academic staffs of DIETs (iii) sample of non-academic staffs (iv) sample of student-teachers.

3.3.1. Selection of DIETs

The major aim of the study was to assess the HRD Climate of the District Institute of Education and Training (DIETs). Hence, the list of functional DIETs working in the State of Rajasthan was procured from Directorate of Education, Bikaner as well as from Director, State Institute of Educational Research and Training (SIERT), Udaipur. Except a few districts, every district has one DIET. The State of Rajasthan has 34 districts. There are 30 DIETs. Two DIETs from each of the educational zones, namely, Ajmer, Bikaner, Bhartpur, Jaipur, Jodhpur, Kota and Udaipur were zone-wise randomly selected for the present study. Thus fourteen DIETs were selected for sample of the study. For the purpose of data regarding infrastructure facilities and HRD Climate these fourteen DIETs were considered as sample.

These are as follows:

Table - 3.1:Distribution of DIETs and Educational Zone

S.No.	Name of the DIET	Educational Zone
1.	DIET, Bhilwara	Ajmer
2.	DIET, Nagour	
3.	DIET, Bikaner	Bikaner
4.	DIET, Churu	
5.	DIET, Bhartpur	Bhartpur
6.	DIET, Karoli	
7.	DIET, Sikar	Jaipur
8.	DIET, Alwar	
9.	DIET, Jodhpur	Jodhpur
10.	DIET, Pali	
11.	DIET, Jhalawar	Kota
12.	DIET, Bundi	
13.	DIET, Dungarpur	Udaipur
14.	DIET, Banswara	

3.3.2. Selection of Academic Staff and Non-academic Staff

One hundred fifty (150) Teaching staff and 121 Non-teaching staff of the 14 sampled DIETs who were present at the time of data collection, constituted the sample for the study.

3.3.3. Selection of Student-Teachers

Twenty (20) student–teachers of final year of BSTC (Basic School Teacher Certificate) were randomly selected from each of the 14 sampled DIETs for studying their perceptions regarding their BSTC training programme.

The distribution of sample of DIETs, Academic and Non-academic staff and student- teachers is shown in table – 3.2.

Table – 3.2: Distribution of Sample

S.No.	Eduactional Zones	DIETs	No. of Academic Staff	No. of Non-Academic staff	No. of Student-Teachers. (II year BSTC)
1.	Ajmer	DIET, Bhilwara	09	10	20
		DIET, Nagaur	13	8	20
2.	Bikaner	DIET, Bikaner	12	10	20
		DIET, Churu	12	9	20
3.	Bhartpur	DIET, Bhartpur	14	10	20
		DIET, Karoli	14	9	20
4.	Jaipur	DIET, Sikar	08	6	20
		DIET, Alwar	11	8	20
5.	Jodhpur	DIET, Jodhpur	13	8	20
		DIET, Pali	07	9	20
6.	Kota	DIET, Jhalawar	10	8	20
		DIET, Bundi	11	8	20
7.	Udaipur	DIET, Dungarpur	08	9	20
		DIET, Banswara	08	9	20
	Total	DIETs - 14	150	121	280

3.4. Tools of the study

The following tools were used for the study:

1. DIET Profile Tool

2. Human Resource Development Climate Questionnaire (HRDCQ) for Lecturers of DIETs

3. HRD Climate Perception Tool (HRDCPT) for non-academic staff of DIETs

4. Student - Teacher Perception Questionnaire (STPQ) for 2nd year student-teachers

5. Focused Group Discussion with academic staff

6. Focused Group Discussion with non-academic staff

7. Focused Group Discussion with 2nd year student-teachers

* Tool No.2, that is, HRDCQ for Lecturers of DIETs initially constructed by S.Nagpal (1997) was adopted by the investigator for the present study. Rest of the six tools were constructed by the investigator.

Each tool is described in detail in terms of its selection/construction in the following paragraphs.

3.4.1. DIET Profile Tool

DIET Profile Tool has been constructed by the investigator. This profile was used to study the enrolment, staff position, building facilities, hostel facilities, library and reading room, and academic achievement. In the present study, the investigator took help of DIET guideline and prepared profile tool to check the infrastructure facilities. In this profile tool, there are three broad areas with sub areas. This included enrolment and results, staff position, physical facilities including institute campus, building facility, hostel facilities for girls and boys, staff quarters, support services facility, furniture and equipment facility, different rooms for activities, different equipments, playground, audio-visual facilities, library facility, and extension activities. With the help of above points profile tool was prepared. This profile tool was shown to the guide and after discussion, it was given to the experts in the field for validation.

The DIET profile tool was used to study the first objective of the present study.

3.4.1.1 Validity of tool

Validity of the tool was established by incorporating the suggestions of the experts.

3.4.2 Human Resource Development Climate Questionnaire (HRDCQ)

In 1986, Rao-Abraham developed a 5-point scale of 38 items to investigate HRD Climate in private and public sector organization. Nagpal (1997) developed 40 item scale on similar lines. It is exclusively designed for applicability to educational administration in various teacher educational institutions. The researcher has adapted the Dr.Shakuntla Nagpal Scale and modified this scale and developed 50 item scale on similar line. This scale has 10 major factors, which reflect the overall HRD Climate of an educational institute. These are:

    i.   Responsibilities – Inspiration to take initiative towards faculty empowerment.

ii. Reward- Positive inspirational incentive from authorities.

iii. Risk taking behavior- Positive reinforcement from seniors to try out new ideas without worrying about results.

iv. Top support- Guidance in acquiring competencies from heads, in-charges or senior faculty members.

v. Feedback- Positive comments or guidelines for improvement toward desired direction to reinforce development behavior.

vi. Supportive HRD Practice- Organizing of pre-service and in-service training programmes for professional development.

vii. Openness versus communication- Freedom of expression.

viii. Trust- Faith in the capabilities of employees.

ix. Team spirit- Working jointly on institutional projects by sharing duties and responsibilities.

x. Collaboration- Cooperation among all working units for planning and execution of the institutional task.

Placement of items in the HRDCQ is as below:

Table - 3.3: Items of HRD Climate in the HRDCQ

S.No.	Factors	Serial order in the scale	Total items
1.	Responsibilities	21,23,24,27,34,38,39	7
2.	Risk taking behaviour	16,22,41	3
3..	Top support	1,2,6,7,12,14,17,40	8
4.	Feed back	18,19,26,35	4
5.	Supportive HRD Climate	3,4,5,8,11,32,37	7
6.	Openness versus Communication	10,25,28,29,30	5
7.	Trust	15,42,47	3
8.	Team sprit	9,43,48,49,50	5
9.	Collaboration	20,31,33,36	4
10.	Reward	13,44,45,46	4
		Total	50

Form the table 3.2 one can see that total fifty questions were put into questionnaire for the collection of the data. All questions were to be responded on a five point rating scales.

Items grouped under each dimension are as below:

Responsibilities- The manifestation of responsibility is reflected in the following items:

1. When staff members are deputed for training, they take it seriously and try to learn from the programme they attend.- 21

2. Staff members are encouraged to take initiative and do things on their own without having to wait for instructions from the authorities.- 23

3. Delegation of authority to encourage juniors to shoulder their responsibilities is quite common in this institute.-24

4. Staff members in this institute are given responsibilities to arrange seminars.- 27

5. Staff members enjoy academic autonomy along with responsibility and accountability.- 34

6. Staff members are keen to take responsibilities for arranging workshops and seminars for wider dissemination of ideas.- 38

7. Staff members are often encouraged to present their papers in faculty meetings.- 39

Risk taking behaviour- The reflection of Risk taking behaviour is indicated in the following items:

1. Staff members are encouraged to experiment with new methods and try out innovative ideas in their classes.- 16

2. Staff members returning from training programmes are given opportunities to try out what they have learnt.- 22

3. Staff members of this institute make efforts to identify and utilise the potential of their colleagues.- 41

Top-Support- How much the head supports his colleagues is assessed from the following items:

1. The head of this institution ensures that staff members enjoy their work.- 1

2. The head believes that human resources are extremely important and therefore all staff members have to be treated more humanely.- 2

3. The Head of your institute takes active interest in his colleagues and helps them in learning their job.- 6

4. People lacking in job related competencies are helped to acquire competencies rather than being left unattended.- 7

5. The Head and In charges of various department guide their colleagues and prepare them for future responsibilities and tasks they are likely to take up in the institute.-12

6. When any staff member intends to take up new project the principal helps him to develop the proposal.- 14

7. When any staff member makes a mistake, the Head helps him to correct and improve such mistakes rather than punish or discourage him/her.- 17

8. Staff members are given training for the development of instructional material.- 40

Feed back- Following items assess the level of feedback process:

1. Weaknesses of staff members are communicated to them in a non-threatening manner.- 18

2. When critical comments are given to staff members they take it seriously and use it for their development.- 19

3. There is constant feedback given by the Head on the good performance of staff members at various levels.- 26

4. This institution keeps on conducting experiments/projects which provide us feedback for improving training, research and professional support activities.- 35

Supportive HRD Climate- Following items are reflective of supportive HRD Practices:

1. Professional development of the staff members is seen by the Head as an important part of his job.- 3

2. The personnel policies in this institute facilitate development of all staff members.- 4

3. The Head is willing to invest a considerable part of his/her time to ensure the development of his staff members.- 5

4. The Head of this institution believes that staff member's behaviour can be developed at any stage of their life.- 8

5. The Psychological climate of this institute is very conducive for professional development of its staff.- 11

6. We have developed a feeling of personal dignity and self confidence while working in this institute.- 32

7. Staff members are encouraged to take up new projects to improve the quality of training methodology.- 37

Openness versus Communication- This factor is assessed from the following items:

1. Staff members of this institute are very informal and don't hesitate in discussing their personal problems with their Heads of department.- 10

2. When problems arise, people discuss these problems openly and try to solve them amicably rather than accusing each other.- 25

3. The staff members are quite open in this institute and as such don't feel reluctant to communicate their problems to each other.- 28

4. When meetings are conducted, all staff members are allowed to express their opinions freely.- 29

5. This institute is a place where we discuss our professional problems with each other and try to resolve them amicably.- 30

Trust- The item below is an assessment of trust:

1. Staff members of your institute don't have fixed mental impressions about their colleagues.- 15

2. Staff members of this institute trust each other.- 42

3. All the staff members at the institute have friendly relation.- 47

Team Spirit- It is assessed by the following item:

1. Supportive staff members (like AO, clerk, peons etc.) of this institution feel responsible to render their support and help the academic staff.- 9

2. . The staff members observer team sprits of high order.- 43

3. Lecturers attend to the individual problems of the students even after college hours.- 48

4. Extra duties for lecturers are allotted to keep them fruitfully busy.- 49

5. The social climate is very conducive for professional development of its staff.- 50

Collaboration- The following items assess collaboration:

1. Staff members in this institution take pain to find out their strength and weaknesses from their colleagues in order to improve the quality of Teacher Education.- 20

2. We are welcome to walk into head's office anytime for anything and get into a meaningful discussion with him.- 31

3. We derive job satisfaction through professional competence acquired in this institute.-33

4. Staff members are invited to participate fully in the planning and execution of the projects.- 36

Reward- The following item assesses the reward:

1. There are mechanisms in this institution in rewarding staff members for doing any good work like presentation of paper in meeting or development of instructional material.- 13

2. Performance appraisal reports in this institute are based on adequate information.- 44

3. Performance appraisal reports in this institute are based on objective assessment.- 45

4. Promotion decisions are based on the profiles of the promotees.- 46

After exhaustive review of the present 50-item scale, it was observed that more than 22 items were exclusive to HRD Climate, the rest being common with items included in organizational climate. These exclusive items are related to openness-Confrontation (conflict), Trust, Autonomy, Productivity, Authenticity, and Collaboration (OCTAPAC Culture), which is specific to HRD Climate.

3.4.2.1. Validity of the HRDCQ

Content validity of the tool was established by the experts.

3.4.2.2. Scoring of the HRDCQ

The scoring of the Human Resource Development Climate Questionnaire was done on a five point rating scale as follows:

Table - 3.4: HRDCQ Scale

Scale	Almost always true	Mostly true	Sometime true	Rarely True	Not at all true
Rating point	5	4	3	2	1

These rating points obtained by the respondents were converted into scores, factor-wise as well as overall HRD Climate. Thus, the ranges of scores for ten factors of HRD Climate were as follows:

Table - 3.5: HRD Climate Score Range

S. No.	Factors	No. of Items	Range of Scores
1.	Responsibilities	7	7-35
2.	Risk taking behaviour	3	3-15
3.	Top support	8	8-40
4.	Feed back	4	4-20
5.	Supportive HRD Climate	7	7-35
6.	Openness versus Communication	5	5-25
7.	Trust	3	3-15
8.	Team sprit	5	5-25
9.	Collaboration	4	4-20
10.	Reward	4	4-20
	Total	50	50-250

The score range from minimum to maximum (50-250) on the Human Resource Development Climate Questionnaire (HRDCQ) was differentiated into five class intervals 0-50, 51-100, 101-150, 151-200, 201-250. On the basis of the score obtained by the teaching staff the frequencies were calculated against the five class intervals. On the basis of the frequencies obtained on HRDCQ was estimated as very good, good, average, poor, very poor.

3.4.3. HRD Climate Perception Tool

A HRD Climate Perception Tool has been developed by the investigator himself for the assessment of the HRD Climate of the sampled DIETs. The areas and the items were collected from the DIETs guidelines provided by the MHRD, Govt. of India. In this tool there were total thirty five questions. This includes capability of correspondence, allocation of funds, maintenance of articles, buildings, furniture etc. With the help of above points, HRD Climate perception tool was prepared. This copy of perception tool was shown to the guide. Then it was discussed with a group of teacher educators who were associated directly or indirectly with the DIETs and teachers in the renowned institution. The tool was modified in the light of their suggestions.

3.4.3.1 Description of the Tool

The HRD Climate Perception Tool covers the following aspects-

    a. Capability to correspond with funding agencies.

    b. Allocation of funds.

    c. Timely disbursement and proper accounting of funds.

    d. Maintenance of articles, buildings, furniture, equipment, etc.

    e. Responsibility of printing question papers and their distribution.

    f. Conduct of examination and preparation of result.

3.4.3.2. Validity of the Tool

Validity of the tool was established by the experts.

3.4.3.3. Scoring of the Tool

All the items in this tool were Yes/No type, except, last one. In this tool there were thirty five questions. Out of these one question was open-ended (question no.35). The scoring of the HRD Climate perception tool was done on the basis of one-zero. Thus, the total responses were converted into the HRD Climate Perception scores. The total scores were used for further statistical analysis.

3.4.4. Student-Teacher Perception Questionnaire (STPQ)

The Student-Teacher Perception Questionnaire has been developed by the researcher himself for the assessment of pre-service training programme (BSTC) provided by the DIETs.

The areas and the items were collected from different sources, such as, reports, journals and DIET Guidelines published by the MHRD, Govt. of India. In this questionnaire there were sixty two items. This included areas of infrasturctue facilities and learning resources, seminar and innovations, transaction of content, management of practice teaching, teacher-students relationship, and library and hostel facility. With the help of above areas questionnaire was prepared. This copy of questionnaire was shown to guide and after discussion, it was discussed with a group of teacher educators who were associated with the pre-service and in-service education. The questionnaire was modified in the light of their suggestions.

3.4.4.1 Description of the STPQ

The Student-Teacher Perception Questionnaire (STPQ) covered the following aspects of the pre-service training programme.

    i. Infrastructure facilities and learning resources

ii.   Seminars and Innovations

iii.   Transactional approaches used by the teaching staff

iv.   Management of training course (i.e. BSTC Practice Teaching, Block Teaching etc.)

v.   Strength and weakness of the BSTC programme

vi.   Teacher-student relation

vii.   Library and Hostel facility

The details of above dimensions are as under:

i. Infrastructure facilities and learning resources:

It is one of the major components of Pre-Service Teachers perception questionnaire. Item which are kept under this component include adequate number of room/hall, furniture, toilet facility, library facility, computer facility in library.

ii. Seminar and innovations

In this aspect, organization of seminar, extension lectures, group discussion by experts, creative activities for students, educational tour, and motivational approaches are included.

iii. Transactional approach used by the teaching staff.

In this aspect, transactional approaches like lecture, discussion, demonstration, group activities, role-playing, project method, tutorial, computer-assisted instruction, self learning exercise are included.

iv. Management of teaching course (i.e. practice teaching of BSTC)

It includes organization of demonstration lesson, Micro-teaching, practice teaching; block teaching, method of lesson plan designing.

v. Strength and weakness of the BSTC programme.

It includes use of child-centered approach, knowledge and skills employed, and use of teaching strategies.

vi.Teacher-student relation.

It includes teachers' behaviours, extra care about the student complaints, motivation to higher achievers, and adjustment with teachers.

vii. Library and Hostel

This aspect includes reading room, books for book bank, Newspaper and journals, etc.

3.4.4.2. Validity of the STPQ

Content validity of the questionnaire was established by consulting the experts.

3.4.4.3. Scoring of the STPQ

Most of the items in this questionnaire were Yes/No type except one question which was open ended regarding their opinion about SUPW/Work experience workshops (question no.23). The scoring of the pre-service teacher perceptions questionnaire was done on the basis of the one-zero. The frequency distribution of all the responses were prepared and then converted into percentages. The total score, thus, found was used for further statistical analysis. Responses to open ended questions were used for qualitative analysis.

3.4.5 Focused Group Discussion with academic staff

In the present study the investigator designed an unstructured focused group discussion schedule for the academic staff who were directly involved in the functioning of the DIET. For these following points were kept in view- responsibilities, risk taking beaviour, top support, feedback, supportive HRD Climate, openness versus communication, trust, team spirit, collaboration, reward. This copy of focused group discussion schedule was shown to the guide and after discussion modified according to suggestions. This focus group discussion schedule contained twenty-four questions.

3.4.6 Focused Group Discussion with non-academic staff

In the present study investigator designed an unstructured focused group discussion schedule for the non-academic staff who were directly involved in the functioning of the DIET. For this following points were kept in view- responsibilities, risk taking beaviour, top support, feed back, maintenance of articles, workload etc. This copy of focused group discussion schedule was shown to the guide and after discussion modified according to suggestions. This focus group discussion schedule contained ten questions.

3.4.7 Focused Group Discussion with 2nd year Student- Teachers

In the present study investigator designed an unstructured focused group discussion schedule for the 2nd year student-teacher of BSTC. For this following point were kept in view- infrastructure facilities, innovation, teaching method, teaching aids, method of lesson plan, teacher-students relationship, library facility, about books, hostel facility, about the hostel climate. This copy of focused group discussion

schedule was shown to the guide and after discussion modified according to suggestion. This focus group discussion schedule contained ten questions.

3.5. Procedure for data collection

The investigator visited the 14 DIETs personally and administered the questionnaire. Focus group discussions of all the groups were conducted by the investigator.

DIET profile tool was filled up by the researcher himself with the help of principal, Senior Lecturers, office superident (OS) and from the official record of the DIETs.

The HRD Climate Questionnaire was administered on all the academic staff (i.e. teaching staff) of the sampled DIETs. In the same way HRD Climate Perception Tool was administered on all the non-teaching staff, such as, librarian, Physical Teacher Instructor (PTI), clerk, lab. Assistant, etc. of the DIETs.

Student- Teacher Perception Questionnaire (STPQ) was administered on the final year pupil-teachers of Basic School Teacher Certificate (BSTC) programme. 20 pupil teachers were selected randomly from each DIET. Each one of them was informed about the purpose of the study and requested for their active help and support.

The pupil teachers and non-teaching staff were requested to express their views by putting tick (√) mark against appropriate answer. There was no time limit. In the same way the academic staff was requested to give their assessment of the HRD Climate of their institute (DIET) by rating 1 to 5, where 5 indicates Almost always true, 4 Mostly true, 3 Sometimes true, 2 Rarely true, 1 Not at all true. Supervision was done and finally the questionnaires were collected by the investigator. On an average a questionnaire was completed in 30-35 minutes. The scoring of the tool was done according to the pre-planned scoring procedure.

3.6. Statistical Techniques used

Collected data were analyzed using both qualitative as well as quantitative techniques. Quantitative data collected through the HRD Climate Questionnaire, HRDC Perception tool, PTPQ were analyzed using statistical techniques, namely, frequency, percentage. A non-parametric technique, namely, Chi-Square was also used.