

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.0.0 INTRODUCTION**

This chapter is dealing with the research methodology adopted in the present study. The main focus of this chapter is to describe the research design used in this study. It describes the methods used and how the data were collected to address the aims and questions of the present study. It begins by presenting objectives of the study followed by research methodology i.e. population of the study, sample of the study, development procedure of the tools describes including the initial formulation of the items, tools of data collection, and analysis procedure of the data .

#### **3.1.0 OBJECTIVES OF THE STUDY**

The present study was designed to achieve the following objectives.

1. To develop a job satisfaction scale for teacher educators and to standardize it.
2. To measure the job satisfaction of secondary teacher educators working in the secondary teacher education institutes in Gujarat
3. To study the Job Satisfaction of secondary teacher educators with respect to their personal variables viz. sex, area of working (rural/ urban) and age, working in the secondary teacher education institutes in Gujarat
4. To study the Job Satisfaction of teacher educators with respect to their professional variables viz. Teaching Experience, Educational Qualification, Working conditions, level of Individual development, level of recognition, level of Responsibility, working in the secondary teacher education institutes in Gujarat.
5. To study the relative importance of personal variables affecting the Job Satisfaction of teacher educators working in the secondary teacher education institutes in Gujarat.
6. To study the relative importance of professional variables affecting the Job Satisfaction of teacher educators working in the secondary teacher education institutes in Gujarat.

### **3.2.0 RESEARCH METHODOLOGY**

This study has adopted the survey method. There are many research methods available for a study of job satisfaction. In any social science research, there is no single method that should be regarded as the most suitable or applicable without first scrutinizing the various approaches available. As Punch (1998) asserts, “each approach has its strengths and weaknesses”. A researcher’s task, according to Punch (1998), is to understand the strengths and weaknesses, analyze any particular research situation in the light of those strengths and weaknesses and select the approach, or combination of approaches, on the basis of that analysis. This notion further justifies the method selected for this study. A predominantly quantitative approach is appropriate for this kind of study, without dismissing the practicality and applicability of other methods, including qualitative and combined approaches, for other situations.

As mentioned in chapter two, almost each of the studies used quantitative methods involving survey questionnaires to collect quantitative data. Such methods have been widely used by past researchers in the area of job satisfaction on the grounds that data collection can be more far reaching than is possible with a predominantly qualitative approach. Also the stated objectives predict the adoption of a quantitative approach for the present investigation. Thus, looking into the nature of study the approach adopted here is quantitative in nature.

### **3.3.0 POPULATION OF THE STUDY**

The population of the present study comprises of all the teacher educators working in secondary teacher education institution in Gujarat i.e. in all the fifteen Universities. Gujarat has nine state level government universities namely Gujarat University in Ahmedabad, Sardar Patel University in Vallabh Vidyanagar, Veer Narmad South Gujarat University in Surat, The Maharaja Sayajirao University (M.S.University) in Baroda, Gujarat Vidyapith in Ahmedabad, Saurashtra University in Rajkot, Bhavnagar University in Bhavnagar, Hemchandracharya North Gujarat University (NGU) in Patan, Krantiguru Shyamji Krishna Verma Kachchh University in Kachchh and one The Indian Institute of Teacher Education in Gandhinagar. State also has four private universities namely Ganpat University in Mehsana, Kadi Sarva Vishwavidyalaya in Gandhinagar, Calorx Teachers' University in Ahmedabad, and

Navrachana University in Vadodara. Apart from these universities, there is a university in Mumbai called S.N.D.T. University which has nearly 90 affiliated colleges of education in Gujarat. Thus, in Gujarat fifteen universities have secondary teacher education program.

Number of institutions may be more but for the present study only the secondary teacher education institutes included in the National Council of Teacher Education (NCTE) recognized list from website ([www.wrcncte.org.in](http://www.wrcncte.org.in)) are considered as population as on date there are 213 institutions working in Gujarat which are recognized by NCTE for teacher education institutions 2012-13 remains unchanged since 2007. All 1704 teacher educators for the academic year 2009-10 working in these 213 institutions comprise the population of study working under fifteen universities in Gujarat.

#### **3.4.0 SAMPLE OF THE STUDY**

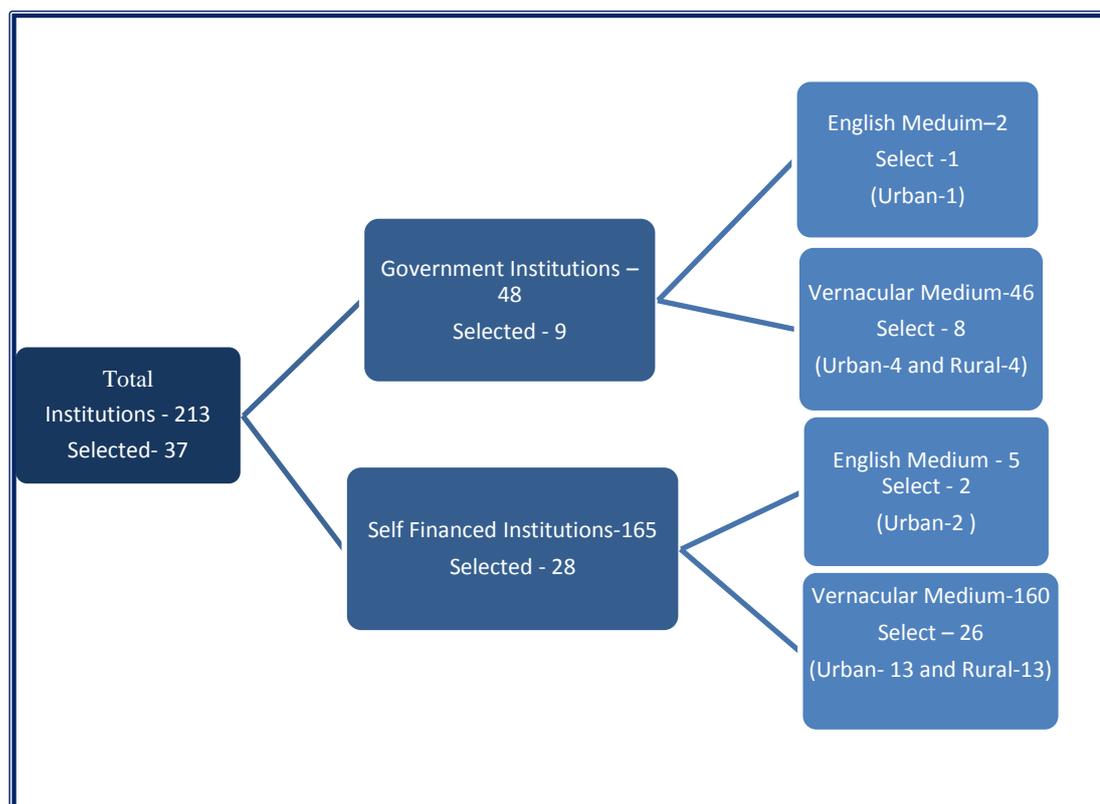
Form the population of teacher educators it was seen with two strata among them that is types of institution (government and self financed) and the medium of teacher educators that is English and vernacular medium. Hence considering these two strata and to have a representative sampling stratified random sampling method was used in the present study to select the sample.

30% of the institutions were selected as the sample with the help of stratified random sampling. 64 institution and 512 teachers were selected but out of these only 37 institutions responded. In all these 64 institutions there are only 424 teachers available and many teachers post were vacant. The tools were sent to all these 424 teachers and data were collected from 184 teachers. All these 184 teachers were from 37 institutions which actually served as the sample of the present study.

Attempt was made to take 30% of the population as sample from different strata as the availability of institution in different strata. Hence in some cases the proportion of sample was up to 50% when the number of population in strata was quite low. As per the sample design a total of 64 institutions were selected randomly from different strata. However the researcher was able to collect data from 37 institutions from different strata.

Out of 184 respondents 99 were male respondents and 85 were female respondents. In 213 teacher education institutions, 48 teacher education institutions were government aided and 165 teacher education institutions were self financed. Further 48 government teacher education institutions were stratified into English and other vernacular institutions. Also 165 self financed teacher education institutions were stratified into English and other vernacular institutions. The sample institutions were selected on the basis of stratified random sampling technique. This stratified random sampling technique was used to ensure representativeness as each member of the population has a fair and equal chance of being chosen. The above discussed sampling technique is represented in the given figure 3.1.

**Figure 3.1: Distribution of Sample taken through Stratified Random Sampling Technique**



A proportionate increase of sample was adopted according to the non availability or in case of drop out in the number of colleges at the time of data collection on the basis of stratified random sampling.

### 3.5.0 TOOLS OF THE STUDY

There was a need to study the job satisfaction of secondary teachers and others related aspects. The researcher developed following tools for the present study (A set of these tools have been appended in the Appendices). Tools developed for the present study are as follows.

- **Job satisfaction scale**
- **Information Schedule**
- **Scale for measuring Working Condition**
- **Scale for measuring Individual Development**
- **Scale to measure Responsibility**
- **Scale for measuring Recognition**
- **Relative Importance to Personal Variable**
- **Relative Importance to Professional Variable**

Procedure of development of the above tools is given below.

#### 3.5.1 Job Satisfaction Scale

Considering the different aspects of teacher education researcher has identified the areas of teacher education and observing the objectives of teacher educations as described earlier by the NCERT (1998). For preparing the job satisfaction scale, researcher rigorously went through various sources and collected job satisfaction scale and other related scales like Job Descriptive Index (JDI), Job Satisfaction Inventory, Job Satisfaction Scale developed by Dolke in (1970), Parmod Kumar and Mutha D.N in (1976), and Amar Singh and T.R. Sharma in (1999) , Herzberg Two-Factor Model, the Minnesota Satisfaction Questionnaire (MSQ) and Job Satisfaction Questionnaire, through previous studies conducted on this area. Going through these scales researcher identified the ways of constructing the items and developed his own scale on Job satisfaction and other mentioned scales. The job satisfaction scale is having appropriate items under the seven areas namely; teaching, research, administrative work other than teaching, facility available, security of present and future, in terms of human relationship (inter and intra), and miscellaneous areas. After preparing the items in each category, items were clubbed together and limit it to 80 in number.

The first draft of job satisfaction was prepared in which number of items were 137 and aspects covered Attitude towards teaching profession, Teaching, Research and extension work, Working Condition, Security of present and future, Human relationship, Teachers Appraisal and Students Feedback, Teacher educator and students interaction. Each aspects has different number of items like in Attitude towards teaching profession had 7 items, Teaching covered teaching, responsibility and workload has 20 items, Research and extension work covered Research, Seminar paper, Publication, workshop had 20 items, Working Condition covered Administration work, Facility available and recognitions had 20 items for Administration work, 14 items for facility and 7 items for recognition respectively, Security of present and future had 14 items, Human relationship had 10 items, Teachers Appraisal and Students Feedback had 10 items and in Teacher educator and students interaction category has variables related to language proficiency, registered language, practice teaching, assignments, pair work and techno proficiency had 15 items. Overall number of items in the tool was 137 and if one tries to fill the tool get tired and feel uncomfortable. When the job satisfaction scale was ready researcher consulted the experts and they suggested that the tool was too big it would be better if you reduce the number of items and make different scales that will save time and respondent might not feel tired. Expert's suggestions helped a lot to construct the job satisfaction scale. From this stage researcher started modifying the first draft and wherever items were found overlapping or similar type of items were modified.

The final job satisfaction scale developed by the researcher has 80 items. Aspects included in job satisfaction scale were related to profession, teaching, duties as a teacher educator, working environment and recognition, teacher development, administration, infrastructure, relation with colleagues, appraisal and stress. In the job satisfaction scale items numbers from 1 to 8 were related to profession. Similarly item numbers from 9 to 15 were related to teaching, item numbers from 16 to 25 were related to teaching, item numbers from 26 to 34, item number 44 and item numbers from 46 to 50 were related to working environment and recognition, item numbers from 35 to 39, item number from 51 to 58 and item number 60 were related to administration, item number 59 was related to teacher development, item numbers from 40 to 43 also item number 45 were related to infrastructure, item numbers from

61 to 69 are related to relation with colleagues, item numbers from 70 to 75 were related to appraisal and item numbers from 76 to 80 are related to stress.

**Job satisfaction scale:** A Likert type five point summative rating scale of job satisfaction was constructed by the researcher. The Job satisfaction scale was in the form of an open-ended questionnaire. This scale is five point scale range from unhappy to extremely happy and these points highlight the five levels of satisfaction. Common instructions were given by the researcher to the sample population before filling the form. For an example, is s/he feels the working in present jobs, s/he would tick mark in the space provided under any one of the five levels of the satisfaction. Likewise one has to tick mark other eighty (80) items. Two versions of scales were used for data collection one in English language and other one in Gujarati language.

### 3.5.2 Information Schedule

The information schedule developed by the researcher has 6 aspects. Aspects covered were related to age, gender, educational qualification, teaching experience and area.

This consists of the variables that the investigators would like to test in order to know, how far these variables provides for job satisfaction of the respondent teacher educator. These variables enquire about the respondents, place of occupation, whether s/he lives in an urban or rural area, whether the respondent is a male or a female, his qualification and experience. This personal information schedule helps the researcher in finding the job satisfaction of the particular respondent regarding the variables under study such as Area, Age, Gender, Qualification and Experience not only that it also helps in achieving the third objective of the present study.

### 3.5.3 Scale to Measure Working Conditions

**Scale to measure Working Conditions:** A scale was prepared by the researcher to measure the level of working conditions of teacher educators. This scale measures the level of working conditions responded by teacher educators related to how a respondent feels about his/her working conditions in the institution with respect to twenty (20) items.

There were 20 items in scale for measuring working conditions. Aspects that it covered were related to teaching, students, administration, teacher development, colleagues, infrastructure and overall working conditions.

#### **3.5.4 Scale to Measure Individual Development**

**Scale to measure Individual Development:** A scale was prepared by the researcher to measure the level of individual development among teacher educators. This scale measures the level of individual development responded by teacher educators related to how a respondent feels about his/her institution in working condition with respect to ten (10) items.

There were 10 items in scale for measuring individual development. Aspects included in individual development were paper presentation, research work, visiting different places, participation in seminar/workshop, conducting seminar/ workshop as resource person, professional invitation, discussions, acceptance of new ideas, action research, and confidence.

#### **3.5.5 Scale to Measure Responsibility**

**Scale to measure Responsibility:** A scale was prepared by the researcher to find the level of responsibility of teacher educators. This scale measures the level of responsibility responded by teacher educators related to how a respondent feels about his/her responsibility in the institution with respect to ten (10) items.

There were 10 items in scale for measuring responsibility. Aspects related to responsibility and stress related with it covered workload, isolated working, routine work, information related to the task, fairly distributed work, according to the acceptance of views, confidence in you, related to available time and innovation.

#### **3.5.6 Scale to Measure Recognition**

**Scale to measure Recognition:** A scale was prepared by the researcher to measure the level of recognition of the teacher educators. This scale measures the level of recognition and related to how a respondent feels about his/her institution in recognition with respect to ten (10) items.

There were 10 items in scale for measuring recognition. Aspects that it covered were credit of work done, appreciation by staff, students and principal, supported by staff, good in teaching, personal achievement, student's achievement, research publication and promotion.

### **3.5.7 Relative Importance to Personal Variable**

There were 6 variables in relative importance to personal variable. Aspects included in personal variable are sex, area, marital status, age, experience of teaching and qualification related to education.

### **3.5.8 Relative Importance to Professional Variable**

There were 7 variables in relative importance to professional variable. Aspects that it covered were working conditions, pay scale, job security, system of rewarding, Service length, individual development and responsibility.

## **3.6.0 PROCESS OF VALIDATION FOR DEVELOPED TOOLS**

Once the tools were developed by the researcher list of expert from the field were prepared for validation of the tools. These experts were from different disciplines i.e. from Education, Sociology Gujarati Language and English Language. Researcher personally contacted the respective expert and tools were given them for their valuable suggestions. As per experts suggestions modification were done and the tools were ready for data collection. Hence, the content validity of the tools were found out.

After the process of validation of job satisfaction scale and other related scale. The developed scales were administered on a purposively selected small group of teacher educators and they would not be included in the final data collection.

## **3.7.0 RELIABILITY OF JOB SATISFACTION SCALE**

Process of validation was done as tools developed by researcher were given to experts. For reliability of the tools Cronbach's Alpha was used for internal consistency and assumes that all of the items of job satisfaction scale are equally difficult. The formula of Cronbach's Alpha was applied on the data collected from 184 teacher educators.

**Table 3.1: Cronbach's Alpha Reliability test of administrated sample**

Sr. No	K	SD	Total Variance	$\alpha$
1	80	768.14	107594.7	0.83

From the Table No. 3.1 it was revealed that  $\alpha$  value was found to be 0.83 with K (number of items), Total Variance (TV), and Standard Deviation (SD) which was quite good for the developed scale. Thus, it appeared that the tool used for the present study was reliable and valid. Further would be useful for researchers working in the field of areas of job satisfaction.

### 3.8.0 PROCESS OF DATA COLLECTION

Pilot study was done on the basis of which modification in the tools were done.

Data was collected from the sample teacher educators with the help of Job Satisfaction Scale, Information Schedule, and other mentioned scale by the researcher. All the tools were combined together in a form of booklet. These booklets were distributed by the researcher to the teacher educators either personally visiting the institutions or by mail/courier. Each tool in the booklet is self instructional and has information regarding how to fill the form. Once the data was duly filled by the teacher educators booklets were collected by researcher as per the decided date or by the help of the volunteer among the teacher educators. At some of the places where researcher was not able to visit personally eight booklets were sending through the mail/courier at principal's address and later followed up by telephonic communication. And once they filled the booklet these booklets were collected personally by the researcher or sent back to the researcher's residential address by the volunteer teacher educator/head of the department. So, the data was collected by the researcher going personally or by sending mail to the randomly selected institutions from the random stratified sampling technique. It is assumed that teacher educators filled the booklets with best accuracy to the best of their level.

After the tools were handed over to the head of department or individual teacher educator regularly follow up were taken up and they responded positively. After the period of four months institutions of teacher educators which are not able to complete the tools due to any reasons are considered as dropouts. So, the researcher went for the second attempt and third attempt. So, for the present study researcher was able to

collect the data in three attempts. It was expected that the number of teacher educator would be two hundred and ninety six (296) but actually after three attempts researcher was only able to collect responses from one hundred eighty four (184) teacher educators. The number of tools sent to teacher education institutes were 424 and collected were 184. The percentage of collected data in hand was 43.39% of the total sent tools.

The process of data collection is starts with personally contacting the randomly selected samples. Then researched told the purpose of calling and took the appointment from them. In some of the institution they agree to sent back the filled booklet and other insisted the researcher to go on the specific dates. Researcher was very positive for the selected sample for their responses on regular basis researcher contact them on phone and tried to get the status of completed form.

In some of the institutions booklets were filled within a week by teacher educators and when contacted they responded to collect it back. In some researcher has travelled a lot to personally meet the principal and convince him that your data was confidential and be used for research purpose only. Though they keep the booklets and told the researcher to collect it back. Then also they are not convinced and whenever contacted by the researcher they responded that they need some more time but never responded.

In some of the institutions researcher has contacted them several times on phone and meets them personally to collect the data. In some of the institutions researcher has visited three to four times. This process goes on three to four month period. Finally when they stop responding to the researcher follow up then another sample was randomly selected. This process was continued throughout the data collection till end from the 37 institutions of teacher education.

### **3.9.0 PROCESS OF DATA ANALYSIS**

All the data collected from respondents were analyzed based on descriptive analysis by using the Excel statistical application of Windows 7 version software. The approach used to analyze data was in line with the aims and the problem statements in the study. The approach comprised descriptive analysis for all items, frequency

analysis, internal consistency and analysis of relationships between variables using correlation analysis

**Scoring.** The scoring of job satisfaction and other scales is done by assigning a scale value to each of the five responses. Such as scale value for Strongly agree is 5, for Agree is 4, for Don't Know is 3, for Disagree is 2 and for Strongly disagree is 1. For statements opposing this point of view, the items are scored in this opposite order. Such as scale value for Strongly agree is 1, for Agree is 2, for Don't Know is 3, for Disagree is 4 and for Strongly disagree is 5. Similar scoring is done for working condition scale, level of Individual development, level of responsibility and level of recognition scale. These score vary from scale to scale to making comparison between two or more series of data, and used to describe the relation score are converted to percentages score. Since percentage reduced everything to a common based and thereby allows meaningful comparison to be made.

**Descriptive Analysis.** Descriptive analysis was used to explore the data collected as well as summarizing and describing the data. It was used to describe the gender, age, working experience and kind of institution the context of this study. It was only used for the general observations about the data collected.

**Frequency Distribution.** Frequency distribution was obtained for all the personal data or classification variables. In other words, a frequency distribution is a display of the frequency of occurrence for each score value. It is done to obtain the count of number of responses associated with different values of values and presenting the counts in percentage.

**Pearson Correlation.** Correlation looks at the relationship between two variables in a linear fashion. The Pearson Correlation coefficient describes the relationship between two continuous variables. In other words, it is appropriate to be used for interval and ratio-scaled variables and is used to determine the relationship between one variable with another which is appropriate for the present study. There could be positive correlation between two variables, which is represented by 1.0 (plus 1), or a perfect negative correlation -1.0 (minus 1). Thus, the correlation between two variables could lie between 1.0 (plus 1) and -1.0 (minus 1).

The detailed objective wise data analysis is given in the table 3.2.

**Table 3.2: Objective wise Use of Tools and Data Analysis Techniques**

Obj. No.	Theme	Tools	Data Analysis
1.	Standardization of Job Satisfaction Scale	Job Satisfaction Scale	Correlation, percentile, average, Cronbach's Alpha
2.	To measure Job Satisfaction	Job Satisfaction Scale	Group statistics like, mean, SD, Standard error of mean (SEM) and etc.
3.	Job satisfaction of teacher educators with respect to personal variables	Information Schedule and Job Satisfaction Scale	t- test
4.	Job Satisfaction of teacher educators with respect to professional variables	Job Satisfaction Scale and scales to measure different professional variables.	Correlation, and t-test
5.	Relative importance of personal variables with job satisfaction		Frequency, Intensity Index
6.	Relative importance of personal variables with job satisfaction		Frequency, Intensity Index

All the statistical which are mentioned in the table 3.3, was followed as per Garret (2008) and intensity index was calculated using following formulate which is given on the website <http://www.citehr.com/233580-how-calculate-employee-satisfaction-index.htm>.

To find the intensity Index for top ten items responsible for higher job satisfaction of secondary teacher educators, bottom ten items responsible for lower job satisfaction of secondary teacher educators, raking of professional variables as well as professional variables was found out with the help of intensity index for which given procedure was used.

Procedure to find intensity index for top ten items responsible for higher job satisfaction of secondary teacher educators, bottom ten items responsible for lower

job satisfaction of secondary teacher educators was as described. There was a five-point scale in the questionnaire from teacher educator's response on job satisfaction scale.

For job satisfaction scale teacher educators response on Strongly Agree, Agree, Don't Know, Disagree and Strongly Disagree.

Number was remark from strongly agree (5) to strongly disagree (1). The Total Score for the each and every item was calculated = (total number of responses of 5 \* 5)+(total number of responses of 4 \* 4)+(total number of responses of 3 \* 3)+(total number of responses of 2 \* 2)+(total number of responses of 1 \* 1). Then, total number of questions with answers against each response is calculated (5, 4, 3, 2, and 1). The total number of questions answered was calculated for responses from 184 teacher educator. To find out intensity index for items (80) find out answer of each item was divided by 5. Finally the outcome was sorted from highest to lower order.

Similarly for professional variables and professional variables intensity index was found out by total the number of rank given by secondary teacher educator divide by number of respondents.

### **3.10.0 CONCLUSION**

This chapter gives the overall ideas about the population and sample, how the tool/s were developed, constructed and standardized. In brief need of research design was included in this chapter. Also focus on the administration of tool/s and the procedure of data collection. And tools used for data analysis. This helps in understanding the methodology of the present study in this chapter three. Chapter IV deals with analysis and interpretation of the collected data.