Chapter – 3
Methodology

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3.1 Introduction:

Research is not only to develop the process or to find a formula as we do in the science. But in the field of social science the research work is oriented towards the solution of a problem or to seek an answer of a question. The first step of a research process is to identify a problem. The selection of a problem is governed by reflective thinking. Unthinking activity is governed too completely by tradition or by emotion. Primitive life was largely without effective reflective thought, until some intelligent individual conceived of a new solution for an old problem. Therefore upper educational groups ever do much careful ordered thinking. The normal human mind thinking may be classified into four categories: convergent, divergent reflective and scientific thinking. In reflective thinking individual conceived for a new solution for an old problem, but scientific thinking is in terms of carefully organized reflection.

In research process, the first and foremost step happens to be that of selecting and properly defining a research problem. A researcher must find the problem and formulate it so that it becomes susceptible to research. Like a medical doctor, a researcher must examine all the symptoms (presented to him or observed by him) concerning a problem before he can diagnose correctly.

A research problem, in general, refers to some difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for the same.

There are two types of research problems, viz., those which relate to states of nature and those which relate to relationships between variables. At the very outset the researcher must single out the problem he wants to study, i.e., he must decide the general area of interest or aspect of a subject-matter that he would like to inquire into. Initially the problem may be stated in a broad general way and then the ambiguities, if any, relating to the problem be resolved. Then, the feasibility of a particular solution has to be considered before a working formulation of the problem can be set up. The formulation of a general topic into a specific research problem, thus, constitutes the first step in a scientific enquiry. Essentially two steps are involved in formulating the research problem, viz., understanding the problem thoroughly, and rephrasing the same into meaningful terms from an analytical point of view.

The best way of understanding the problem is to discuss it with one’s own colleagues or with those having some expertise in the matter. In an academic institution the researcher can seek the help from a guide who is usually an experienced man and has several research problems in mind. Often, the guide puts forth the problem in general terms and it is up to the researcher to narrow it down and phrase the problem in operational terms. In private business units or in governmental organizations, the problem is usually earmarked by the administrative agencies.
with which the researcher can discuss as to how the problem originally came about and what considerations are involved in its possible solutions.

The researcher must at the same time examine all available literature to get himself acquainted with the selected problem. He may review two types of literature—the conceptual literature concerning the concepts and theories, and the empirical literature consisting of studies made earlier which are similar to the one proposed. The basic outcome of this review will be the knowledge as to what data and other materials are available for operational purposes which will enable the researcher to specify his own research problem in a meaningful context. After this the researcher rephrases the problem into analytical or operational terms i.e., to put the problem in as specific terms as possible. This task of formulating, or defining, a research problem is a step of greatest importance in the entire research process. The problem to be investigated must be defined unambiguously for that will help discriminating relevant data from irrelevant ones. Care must; however, be taken to verify the objectivity and validity of the background facts concerning the problem. Correctly states that Research Methodology: An Introduction the statement of the objective is of basic importance because it determines the data which are to be collected, the characteristics of the data which are relevant, relations which are to be explored, the choice of techniques to be used in these explorations and the form of the final report. If there are certain pertinent terms, the same should be clearly defined along with the task of formulating the problem. In fact, formulation of the problem often follows a sequential pattern where a number of formulations are set up, each formulation more specific than the proceeding one, each one phrased in more analytical terms, and each more realistic in terms of the available data and resources.

3.2 Research Methodology:-

Research has moved during this century from the periphery to the centre of our social and economic life. What is the nature of this force? Why it is getting momentum? Most of us recognize that the progress which has been made in our society has been largely the result of research; we do not have an exact definition of the term. Most of us have a vague idea of what is involved but our concept of research generally is too much oriented toward experimentation as conducted in the social sciences.

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation or chi-square, how to apply particular research techniques, but they also need to know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and
others will not. All this means that it is necessary for the researcher to design his methodology for his problem as the same may differ from problem to problem. For example, an architect, who designs a building, has to consciously evaluate the basis of his decisions, i.e., he has to evaluate why and on what basis he selects particular size, number and location of doors, windows and ventilators, uses particular materials and not others and the like. Similarly, in research the scientist has to expose the research decisions to evaluation before they are implemented. He has to specify very clearly and precisely what decisions he selects and why he selects them so that they can be evaluated by others also.

From what has been stated above, we can say that research methodology has many dimensions and research methods do constitute a part of the research methodology. The scope of research methodology is wider than that of research methods. Thus, when we talk of research methodology we not only talk of the research methods but also consider the logic behind the methods we use in the context of our research study and explain why we are using a particular method or technique and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others. Why a research study has been undertaken, how the research problem has been defined, in what way and why the hypothesis has been formulated, what data have been collected and what particular method has been adopted, why particular technique of analyzing data has been used and a host of similar other questions are usually answered when we talk of research methodology concerning a research problem or study.

A research study is the complete in depth analysis on a specific area. It is considered extremely important in various fields. Research study can also give food for thought to the new researchers. Scientific research over the years has gained wider popularity. The reason being scientific method in research always harness curiosity leading to scientific information and theories for the properties of the world around us. It makes particle application possible.

Research is done, therefore the hedonistic reason that often it is a highly pleasurable activity which many people pursue simple because they get a kick out of it but there are many other related and unrelated reasons for doing research one investigator may be hoping for immorality or looking for a grandiose world views. Another may want to satisfy his curiosity in research because they feel they want to help people and are convinced that in the long run new knowledge will make like more livable.
3.3 Research Process:

Research process comprises a series of steps or actions required for effectively conducting research and for the sequencing of these steps. The following are the various steps that provide useful procedural guideline regarding the conduct research.

(1) Formulating the research problem;

(2) Extensive literature survey;

(3) Developing the hypothesis;

(4) Preparing the research design;

(5) Determining sample design;

(6) Collecting the data;

(7) Execution of the project;

(8) Analysis of data;

(9) Hypothesis testing;

(10) Generalizations and interpretation, and

(11) Preparation of the report or presentation of the results. In other words, it involves the formal write-up of conclusions.

3.4 Research problem of the present study:-

The present investigation has been mainly aimed to at studying Attitude towards development and modernization in relation to social status. The title specifically, the problem under investigation runs thus-

“Attitude towards Development and Modernization in relation to social status”

3.5 Aims and Objectives of the study:-

(a) Aims:

The investigator made efforts to get a scale measuring development attitudes, there was no such scale available in Gujarati language investigator aimed first to construct a standardized tool of such attitude scale in Guajarati language. Seven major aspects of development relevant to the present study will be selected and items will be constructed.
(b) Objectives of the study:-

The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet. Though each research studies its own specific purpose, we may think of research objectives as falling into a number of following broad groupings:

1. To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as exploratory or formulate research studies).

2. To portray accurately the characteristics of a particular individual, situation or a group (studies with this object in view are known as descriptive research studies).

3. To determine the frequency with which something occurs or with which it is associated with something else (studies with this object in view are known as diagnostic research studies).

4. To test a hypothesis of a causal relationship between variables (such studies are known as hypothesis-testing research studies).

According to the research problem, objectives of present study are as under:

1. To check the differences in attitude towards (Development) Educational development on sex variable.

2. To check the differences in attitude towards (Development) Educational development on social status.

3. To check the differences in attitude towards (Development) Educational development on generation gap.

4. To check the differences in attitude towards (Development) Educational development on sex variable and social status.

5. To check the differences in attitude towards (Development) Educational development on sex variable and generation gap.

6. To check the differences in attitude towards (Development) Educational development on social status and generation gap.

7. To check the differences in attitude towards (Development) Educational development on sex variable, social status and generation gap.

8. To check the differences in attitude towards (Development) Women development on sex variable.

9. To check the differences in attitude towards (Development) Women development on social status.
10. To check the differences in attitude towards (Development) Women development on generation gap.

11. To check the differences in attitude towards (Development) Women development on sex variable and social status.

12. To check the differences in attitude towards (Development) Women development on sex variable and generation gap.

13. To check the differences in attitude towards (Development) Women development on social status and generation gap.

14. To check the differences in attitude towards (Development) Women development on sex variable, social status and generation gap.

15. To check the differences in attitude towards (Development) Health development on sex variable.

16. To check the differences in attitude towards (Development) Health development on social status.

17. To check the differences in attitude towards (Development) Health development on generation gap.

18. To check the differences in attitude towards (Development) Health development on sex variable and social status.

19. To check the differences in attitude towards (Development) d Health development on sex variable and generation gap.

20. To check the differences in attitude towards (Development) Health development on social status and generation gap.

21. To check the differences in attitude towards (Development) Health development on sex variable, social status and generation gap.

22. To check the differences in attitude towards (Development) Social development on sex variable.

23. To check the differences in attitude towards (Development) Social development on social status.

24. To check the differences in attitude towards (Development) Social development on generation gap.

25. To check the differences in attitude towards (Development) Social development on sex variable and social status.
26. To check the differences in attitude towards (Development) Social development on sex variable and generation gap.

27. To check the differences in attitude towards (Development) development on social status and generation gap.

28. To check the differences in attitude towards (Development) Social development on sex variable, social status and generation gap.

29. To check the differences in attitude towards (Development) Economic development on sex variable.

30. To check the differences in attitude towards (Development) Economic development on social status.

31. To check the differences in attitude towards (Development) Economic development on generation gap.

32. To check the differences in attitude towards (Development) Economic development on sex variable and social status.

33. To check the differences in attitude towards (Development) Economic development on sex variable and generation gap.

34. To check the differences in attitude towards (Development) Economic development on social status and generation gap.

35. To check the differences in attitude towards (Development) Economic development on sex variable, social status and generation gap.

36. To check the differences in attitude towards (Development) Industrial development on sex variable.

37. To check the differences in attitude towards (Development) Industrial development on social status.

38. To check the differences in attitude towards (Development) Industrial development on generation gap.

39. To check the differences in attitude towards (Development) Industrial development on sex variable and social status.

40. To check the differences in attitude towards (Development) Industrial development on sex variable and generation gap.

41. To check the differences in attitude towards (Development) Industrial development on social status and generation gap.
42. To check the differences in attitude towards (Development) Industrial development on sex variable, social status and generation gap.

43. To check the differences in attitude towards (Development) Infrastructure development on sex variable.

44. To check the differences in attitude towards (Development) Infrastructure development on social status.

45. To check the differences in attitude towards (Development) Infrastructure development on generation gap.

46. To check the differences in attitude towards (Development) Infrastructure development on sex variable and social status.

47. To check the differences in attitude towards (Development) Infrastructure development on sex variable and generation gap.

48. To check the differences in attitude towards (Development) Infrastructure development on social status and generation gap.

49. To check the differences in attitude towards (Development) Infrastructure development on sex variable, social status and generation gap.

50. To check the differences in attitude towards (Modernization) Socio-religious on sex variable.

51. To check the differences in attitude towards (Modernization) Socio-religious on social status.

52. To check the differences in attitude towards (Modernization) Socio-religious on generation gap.

53. To check the differences in attitude towards (Modernization) Socio-religious on sex variable and social status.

54. To check the differences in attitude towards (Modernization) Socio-religious on sex variable and generation gap.

55. To check the differences in attitude towards (Modernization) Socio-religious on social status and generation gap.

56. To check the differences in attitude towards (Modernization) Socio-religious on sex variable, social status and generation gap.

57. To check the differences in attitude towards (Modernization) marriage on sex variable.

58. To check the differences in attitude towards (Modernization) marriage on social status.
59. To check the differences in attitude towards (Modernization) marriage on generation gap.

60. To check the differences in attitude towards (Modernization) marriage on sex variable and social status.

61. To check the differences in attitude towards (Modernization) marriage on sex variable and generation gap.

62. To check the differences in attitude towards (Modernization) marriage on social status and generation gap.

63. To check the differences in attitude towards (Modernization) marriage on sex variable, social status and generation gap.

64. To check the differences in attitude towards (Modernization) position of women on sex variable.

65. To check the differences in attitude towards (Modernization) position of women on social status.

66. To check the differences in attitude towards (Modernization) position of women on generation gap.

67. To check the differences in attitude towards (Modernization) position of women on sex variable and social status.

68. To check the differences in attitude towards (Modernization) position of women on sex variable and generation gap.

69. To check the differences in attitude towards (Modernization) position of women on social status and generation gap.

70. To check the differences in attitude towards (Modernization) position of women on sex variable, social status and generation gap.

71. To check the differences in attitude towards (Modernization) Education on sex variable.

72. To check the differences in attitude towards (Modernization) Education on social status.

73. To check the differences in attitude towards (Modernization) Education on generation gap.

74. To check the differences in attitude towards (Modernization) Education on sex variable and social status.
75. To check the differences in attitude towards (Modernization) Education on sex variable and generation gap.

76. To check the differences in attitude towards (Modernization) Education on social status and generation gap.

77. To check the differences in attitude towards (Modernization) Education on sex variable, social status and generation gap.

78. To check the correlation between attitude towards development and modernization.

3.6 Null Hypothesis:

The second step in the research process of social study is to formulate hypotheses. The hypothesis is a tentative solution of a problem. The research activities are planned to verify the hypothesis and not to find out the solution of the problem or to seek an answer of a question. It is very essential to a research worker to understand the meaning and nature of hypothesis. The researcher always plan or formulate a hypothesis in the beginning of the problem. The word hypothesis consists of two words: Hypo + thesis = Hypothesis. ‘Hypo’ means tentative or subject to the verification and ‘Thesis’ means statement about solution of a problem. The world meaning of the term hypothesis is a tentative statement about the solution of the problem. Hypothesis offers a solution of the problem that is to be verified empirically and based on some rationale. A tentative supposition or provisional guess “It is a tentative supposition or provisional guess which seems to explain the situation under observation.”

In the present study of the central hypothesis for this research are as follow:

1. There will be no significant differences in attitude towards (Development) Educational development on sex variable.

2. There will be no significant differences in attitude towards (Development) Educational development on social status.

3. There will be no significant differences in attitude towards (Development) Educational development on generation gap.

4. There will be no significant differences in attitude towards (Development) Educational development on sex variable and social status.

5. There will be no significant differences in attitude towards (Development) Educational development on sex variable and generation gap.

6. There will be no significant differences in attitude towards (Development) Educational development on social status and generation gap.
7. There will be no significant differences in attitude towards (Development) Educational development on sex variable, social status and generation gap.

8. There will be no significant differences in attitude towards (Development) Women development on sex variable.

9. There will be no significant differences in attitude towards (Development) Women development on social status.

10. There will be no significant differences in attitude towards (Development) Women development on generation gap.

11. There will be no significant differences in attitude towards (Development) Women development on sex variable and social status.

12. There will be no significant differences in attitude towards (Development) Women development on sex variable and generation gap.

13. There will be no significant differences in attitude towards (Development) Women development on social status and generation gap.

14. There will be no significant differences in attitude towards (Development) Women development on sex variable, social status and generation gap.

15. There will be no significant differences in attitude towards (Development) Health development on sex variable.

16. There will be no significant differences in attitude towards (Development) Health development on social status.

17. There will be no significant differences in attitude towards (Development) Health development on generation gap.

18. There will be no significant differences in attitude towards (Development) Health development on sex variable and social status.

19. There will be no significant differences in attitude towards (Development) Health development on sex variable and generation gap.

20. There will be no significant differences in attitude towards (Development) Health development on social status and generation gap.

21. There will be no significant differences in attitude towards (Development) Health development on sex variable, social status and generation gap.

22. There will be no significant differences in attitude towards (Development) Social development on sex variable.
23. There will be no significant differences in attitude towards (Development) Social development on social status.

24. There will be no significant differences in attitude towards (Development) Social development on generation gap.

25. There will be no significant differences in attitude towards (Development) Social development on sex variable and social status.

26. There will be no significant differences in attitude towards (Development) Social development on sex variable and generation gap.

27. There will be no significant differences in attitude towards (Development) Social development on social status and generation gap.

28. There will be no significant differences in attitude towards (Development) Social development on sex variable, social status and generation gap.

29. There will be no significant differences in attitude towards (Development) Economic development on sex variable.

30. There will be no significant differences in attitude towards (Development) Economic development on social status.

31. There will be no significant differences in attitude towards (Development) Economic development on generation gap.

32. There will be no significant differences in attitude towards (Development) Economic development on sex variable and social status.

33. There will be no significant differences in attitude towards (Development) Economic development on sex variable and generation gap.

34. There will be no significant differences in attitude towards (Development) Economic development on social status and generation gap.

35. There will be no significant differences in attitude towards (Development) Economic development on sex variable, social status and generation gap.

36. There will be no significant differences in attitude towards (Development) Industrial development on sex variable.

37. There will be no significant differences in attitude towards (Development) Industrial development on social status.

38. There will be no significant differences in attitude towards (Development) Industrial development on generation gap.
39. There will be no significant differences in attitude towards (Development) Industrial development on sex variable and social status.

40. There will be no significant differences in attitude towards (Development) Industrial development on sex variable and generation gap.

41. There will be no significant differences in attitude towards (Development) Industrial development on social status and generation gap.

42. There will be no significant differences in attitude towards (Development) Industrial development on sex variable, social status and generation gap.

43. There will be no significant differences in attitude towards (Development) Infrastructure development on sex variable.

44. There will be no significant differences in attitude towards (Development) Infrastructure development on social status.

45. There will be no significant differences in attitude towards (Development) Infrastructure development (Development) on generation gap.

46. There will be no significant differences in attitude towards (Development) Infrastructure development on sex variable and social status.

47. There will be no significant differences in attitude towards (Development) Infrastructure development on sex variable and generation gap.

48. There will be no significant differences in attitude towards (Development) Infrastructure development on social status and generation gap.

49. There will be no significant differences in attitude towards (Development) Infrastructure development on sex variable, social status and generation gap.

50. There will be no significant differences in attitude towards (Modernization) Socio-religious on sex variable.

51. There will be no significant differences in attitude towards (Modernization) Socio-religious (Modernization) on social status.

52. There will be no significant differences in attitude towards (Modernization) Socio-religious on generation gap.

53. There will be no significant differences in attitude towards (Modernization) Socio-religious on sex variable and social status.

54. There will be no significant differences in attitude towards (Modernization) Socio-religious on sex variable and generation gap.

59
55. There will be no significant differences in attitude towards (Modernization) Socio-religious on social status and generation gap.

56. There will be no significant differences in attitude towards (Modernization) Socio-religious sex variable, social status and generation gap.

57. There will be no significant differences in attitude towards (Modernization) marriage on sex variable.

58. There will be no significant differences in attitude towards (Modernization) marriage on social status.

59. There will be no significant differences in attitude towards (Modernization) marriage Social religious on generation gap.

60. There will be no significant differences in attitude towards (Modernization) marriage on sex variable and social status.

61. There will be no significant differences in attitude towards (Modernization) marriage on sex variable and generation gap.

62. There will be no significant differences in attitude towards (Modernization) marriage on social status and generation gap.

63. There will be no significant differences in attitude towards (Modernization) marriage on sex variable, social status and generation gap.

64. There will be no significant differences in attitude towards (Modernization) position of women on sex variable.

65. There will be no significant differences in attitude towards (Modernization) position of women on social status.

66. There will be no significant differences in attitude towards (Modernization) position of women on generation gap.

67. There will be no significant differences in attitude towards (Modernization) position of women on sex variable and social status.

68. There will be no significant differences in attitude towards (Modernization) position of women on sex variable and generation gap.

69. There will be no significant differences in attitude towards (Modernization) position of women on social status and generation gap.

70. There will be no significant differences in attitude towards (Modernization) position of women on sex variable, social status and generation gap.
71. There will be no significant differences in attitude towards (Modernization) Education on sex variable.

72. There will be no significant differences in attitude towards (Modernization) Education on social status.

73. There will be no significant differences in attitude towards (Modernization) Education on generation gap.

74. There will be no significant differences in attitude towards (Modernization) Education on sex variable and social status.

75. There will be no significant differences in attitude towards (Modernization) Education on sex variable and generation gap.

76. There will be no significant differences in attitude towards (Modernization) Education on social status and generation gap.

77. There will be no significant differences in attitude towards (Modernization) Education on sex variable, social status and generation gap.

78. There will be no correlation between attitude towards development and modernization.

3.7 Variable of Research:

Variable are the conditions or characteristics that the experimenter manipulates, controls or observes. The independent variables are the conditions or characteristics that the experimenter manipulates or controls in his or her attempt to ascertain their relationship to observed phenomena. The dependent variables are the conditions or characteristics that appear, disappear or change as the experimenter introduces, removes or changes independent variables.

There are two types of variable-

(A) Independent variable

(B) Dependent variable

Over here two types of variables has been taken which is mentionable as below:-
(A) **Independent variable**-

The present investigation is designed to study the effects of three independent variables shown as below-

1. Gender- Male/Female
2. Social status- Schedule caste/Schedule Tribe/Upper Class
3. Generation gap- Young/Adult/Age

(B) **Dependent variable**-

1. The investigator has measured by Development Attitude Scale
2. The investigator has measured by Modernization Scale

**3.8 Experimental Design:**

Experimental method is the most sophisticated way of research, particularly in sciences. In this way we study some variables by controlling some variables affecting the previous one. When certain variables can be controlled or manipulated directly in research problem by the investigator, the research procedure is often described as an experiment.

Thus, in an experiment we observe and measure the effect of treatment given to few variables by controlling other variables affecting our observations. The term “treatment” refers to a particular experimental condition. The material to which the treatment is applied and on which the variable under study is measured, is known as experimental unit. Since all variables cannot be controlled, it may cause the error in our observations. It is the experimental error. The whole experiment is conducted according to some plan which is called the design of experiment or experimental design.

Thus, an experimental design is a plan or strategy of investigation conceived so as to solve the research problem.

Without a design, research study is just like the building construction without any plan or map. The design enables us to answer research questions as validly, objectively, precisely and economically as possible.

An experimental design sets up a framework for adequate tests of the relations among variables. Design tells us in a sense “what observation to make” “how to make them” and how to analyze the Quantitative representations of the observations, strictly speaking, design does not tell us precisely what to do, but rather “suggests” the directions of observations making and analysis. A design suggests which variables are active and which are assigned. We can then act to manipulate the active variables and to control the assigned variables.
A design also suggests what type of statistical analysis to use and what may be the inferences by a particular technique applied.

The results obtained in a study dealing with human behavior can never be considered absolutely accurate due to numerous variables. A design tells us “how far we have been able to control the experimental errors”. Most technical function of an experimental design is to control the error variances.

In order to study the main purpose of this research is to know attitude towards development and modernization in relation to social status for this purpose to check main and internal effect of independent variables. 2*3*3 factorial design as shown in the below-

TABLE-1

2 x 3 x 3 Factorial Design

\(N=540\)

<table>
<thead>
<tr>
<th>Variable</th>
<th>A(_1) Male</th>
<th></th>
<th>A(_2) Female</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B(_1)</td>
<td>B(_2)</td>
<td>B(_3)</td>
<td>B(_1)</td>
<td>B(_2)</td>
<td>B(_3)</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Schedule</td>
<td>Schedule</td>
<td>Upper</td>
<td>Schedule</td>
<td>Schedule</td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Caste</td>
<td>Tribe</td>
<td>class</td>
<td>Caste</td>
<td>Tribe</td>
<td>class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C(_1) Young</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>C(_2) Adult</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>C(_3) Aged</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>540</td>
<td></td>
</tr>
</tbody>
</table>

A = Gender
A\(_1\) = Male
A\(_2\) = Female
B = Social status
B\(_1\) = Schedule caste
B\(_2\) = Schedule Tribe
B\(_3\) = Upper class
C = Generation gap

C₁ = Young (18 to 40 years)

C₂ = Adult (41 to 58 years)

C₃ = Aged (59 to up..)s

A-Gender

B-Social status

C-Generation gap

A₁- Male

A₂- Female

B₁- Schedule caste

B₂- Schedule tribe

B₃- Upper class

C₁- Young

C₂- Adult

C₃- Aged

A₁/B₁/C₁- Male/schedule caste/ young

A₁/B₁/C₂- Male/schedule caste/ Adult

A₁/B₁/C₃- Male/schedule caste/ Aged

A₁/B₂/C₁- Male/schedule tribe/ young

A₁/B₂/C₂- Male/schedule tribe/ Adult

A₁/B₂/C₃- Male/schedule tribe/ Aged

A₁/B₃/C₁- Male/Upper class/ young

A₁/B₃/C₂- Male/Upper class/ Adult

A₁/B₃/C₃- Male/Upper class/ Aged

64
A2/B1/C1- Female/schedule caste/ young
A2/B1/C2- Female/schedule caste/ Adult
A2/B1/C3- Female/schedule caste/ Aged
A2/B2/C1- Female/schedule tribe/ young
A2/B2/C2- Female/schedule tribe/ Adult
A2/B2/C3- Female/schedule tribe/ Aged
A2/B3/C1- Female/Upper class/ young
A2/B3/C2- Female/Upper class/ Adult
A2/B3/C3. Female/Upper class/ Aged

3.9 Research Sample:-

Sampling is indispensable technique of behavioral research; the research work cannot be undertaken without use of sampling. The study of the total population is not possible and it is also impracticable. The practical limitation: cost, time and other factors which are usually operative in the situation stand in the way of studying the total population. The concept of sampling has been introduced with a view to making the research findings economical and accurate.

The research design is based on the sampling of the study. A good research design provides information concerning with the selection of the sample population treatments and controls to be imposed.

Generalizability of the research findings is, of course, dependent upon the sampling procedures followed. An ideally either a representative or random sample would be desirable to provide maximum information about the generalizability of research data.

“In every branch of science we lack the resources, to study more than a fragment of the phenomena that might advance our knowledge.”

In this definition a ‘fragment’ is the sample and ‘phenomena’ is the ‘population’. The sample observations are applied to the phenomena i.e. generalization.

In the present research 540 Male and Female will selected us a sample in which 270 Male and 270 Female are taken in 270 Male 90 are from SC-30, ST-30, UC-30 are selected in which 90 are from 30 Young (18 to 40), 30 Adult (41 to 58), Aged (59 to up..) are selected. In 270 Female 90 are from SC-30, ST-30, UC-30 are selected in which 90 are from 30 Young (18 to 40), 30 Adult (41 to 58), Aged (59 to up..) are selected. It is clear by the chart which is us under-
In this research to measure attitude towards development scale are used which are made by Dr. B.D.Dhila and Dr. L.R. Yagnik. Which is in read English scale but in this research the Gujarati adaptation are used. This scale is 5 point scale. Seven major aspects of development relected to the present study are selected and items were constructed. In this research to measure attitude towards modernization. Modernization scale are used which are made by R.S.Singh, A.N.Tripathi and Ramjilala, which is in real Hindi but in this research the Gujarati adoption are used. This scale is 6 point scale and total 32 statements in this scale.

3.10 Research Stools:-

A great variety of research tools are of many kinds and employs distinctive ways of describing and qualifying the data. Each tool is particularly appropriate for certain sources of data yielding information of the kind and in the form that would be most effectively used. Some of these devices merely identify the presence or absence of certain aspects of a situation. Others collect qualitative descriptions which may involve comparisons or contracts between elements present in the situation. Other devices yield quantitative measure in scale measures or in scores. The measurement of what is identified adds an important dimension to description; not only what but how much is revealed.

Many of the tools of research have been designed to yield quantitative measures. Others yield description that may be refined by counts of frequency of appearance. This qualification of data is an essential part of research. While some judgment cannot be expressed in frequency counts percentages, or scores, most data are made more meaningful by qualification. In addition to frequency counts and percentage or fractional comparisons, data may be refined by numerical ratings, rank order placement, paired comparisons, social distance scales, equal appearing intervals, summated ratings and standardized score values.
In this research to collect the data, two scales are used in this research-

(1) Development Attitude scale (DAS):-

The investigator made efforts to get a scale measuring development attitudes. There was no such scale available in Gujarati language, investigator aimed first to construct a standardized tool of such attitude scale in Gujarati language. Seven major aspects of development relevant to the present study were selected and items were constructed. The development aspects of this study are as under-

1. Educational Development
2. Women Development
3. Health Development
4. Social Development
5. Economic Development
6. Industrial Development
7. Infrastructure Development

A attempt was made by the investigator to construct the items. It was difficult take to form statements or items without having a sound scientific base. Hense, in the beginning Sentence Completion Test (SCT) was evolved. It was executed of 75 incomplete capsules or phrases pertaining to the selected seven development aspects as mentioned above and were given a sample of 200 students of both sexes from colleges. On the basis of relevancy of their responses a list of 135 items was prepared and it was given to the five experts associated in the field of psychology, economics and sociology for swultinising the relevance of the statements and language ambiguity it any, following this 30 items were found irrelevant and hence they were dropped for the pilot study.

a. Pilot Study:

Thus, a pilot study form consisting 105 items was prepared on a Likert type scale distributed over 7 aspects (with minimum fifteen in each aspects) in all to be responded on five point scale from strongly Agree to strongly disagree. These items were framed with a case to include positive and negative statements of attitude to the aspects under consideration. The pilot from was administered to 300 student of colleges including both the sexes out of 300 forms in complete forms were dropped and 260 forms were select for item analysis.

Two criterion groups i.e., 27/ of upper scores and 27/ of lower scores were taken for item and analysis. The items depicting discriminative value of 0.32 and above were finally selected for the development attitude scale. In all 105 items showing discrimination between
the two groups were obtained for the final form of the scale of development attitudes towards the 7 development aspects.

b. Standardization of the Development Attitude Scale (DAS):

With the adequate process of items analysis 105 items were obtained. The final form consisted of 70 items out 105 items with ten items in each of the seven aspects as shown in Appendix no 2 (A) and its English version in Appendix no 2 (C). The justification for keeping ten numbers of items for each development aspects was to make it more convenient for the respondents to avoid factor of fatigue.

To record the response, a separate record sheet (Answer sheet form) was devised with the five response categories i.e., strongly agree, agree uncertain, disagree and strongly disagree with specific column boxes, to indicated by putting a cross at the appropriate place. These responses were scored as per key in scoring procedure shown in Appendix no 3. The copy of the DAS has been attached in appendix no 2 (A) along with the answer sheet in Appendix no 2 (B) and the scoring key in the Appendix no 3 at the end.

c. Reliability:

The final form (DAS) was administered to 150 college students (boys and girls). The subjects were asked to indicate their level of agreement or disagreement on a five point scale by marking a cross under the category they think adequate for favorable items scoring was from 5 to 1 (strongly agree to strongly disagree) and for unfavorable items it was from 1 to 5 scores of each subjects. The scores for each subjects were completed and after Spearman Brown’s correction was found to be $r = 0.76$ for the total scale. This demonstrated high reliability of the scale.

d. Validity:

1 Face or Content Validity-

This type of validity was demonstrated by 100% agreement among the four judge regarding the relevance of the items content to the attitudes being measured by the scale.

2 Concurrent Validity-

In order to determine concurrent validity, the scores from each sub-scale were correlated with the scores on the total scale. These values have been given in the Table. The correlations ranged from 0.65 to 0.99.
TABLE-2

Correlation of the sub-scale score with total scale scores.

<table>
<thead>
<tr>
<th>Sub-Scales</th>
<th>Pearson’s-r</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Educational Development</td>
<td>0.77</td>
</tr>
<tr>
<td>2. Women Development</td>
<td>0.66</td>
</tr>
<tr>
<td>3. Health Development</td>
<td>0.65</td>
</tr>
<tr>
<td>4. Social Development</td>
<td>0.72</td>
</tr>
<tr>
<td>5. Economic Development</td>
<td>0.81</td>
</tr>
<tr>
<td>6. Industrial Development</td>
<td>0.82</td>
</tr>
<tr>
<td>7. Infrastructure Development</td>
<td>0.90</td>
</tr>
</tbody>
</table>

3 Scoring procedure and Interpretation for DAS-

The Development Attitude Scale has been adapted in the form of Likert’s to be responded of a five point scale form strongly agree to strongly disagree. Each of the seven development aspects mentioned earlier, contains ten statement of item. Some worded favorably and some unfavorably with respect to the aspects under study. The scores to be awarded for different response categories according to the type of statements are given in the following Table-

The scores obtained by the subject on all the items of the aspects were totaled up separately for each aspect for each subject. The maximum score for each aspect for each subject will be 50 and the minimum 10. The higher or the lower score on each aspect is to be interpreted as shown below.
TABLE-3
Showing different response categories on DAS-

<table>
<thead>
<tr>
<th>Response category</th>
<th>Positive item</th>
<th>Negative item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Uncertain</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

In this scale total 70 statements which was measure positive and negative Attitude of educational Development women Development, Health Development, Social Development, Economic Development, Industrial Development, Infrastrucure Development etc. In every part of total 10 statements.

TABLE-4

<table>
<thead>
<tr>
<th>Sub-Scale</th>
<th>Positive-statement</th>
<th>Negative-statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational development</td>
<td>3,4,8,9,10</td>
<td>1,2,5,6,7</td>
</tr>
<tr>
<td>Women development</td>
<td>1,3,5,8</td>
<td>2,4,6,7,9,10</td>
</tr>
<tr>
<td>Health development</td>
<td>2,6,7</td>
<td>1,3,4,5,8,9,10</td>
</tr>
<tr>
<td>Social development</td>
<td>3,8,9</td>
<td>1,2,4,5,6,7,10</td>
</tr>
<tr>
<td>Economic development</td>
<td>1,2,5,6,9,10</td>
<td>3,4,7,8</td>
</tr>
<tr>
<td>Industrial development</td>
<td>1,2,5,7,8</td>
<td>3,4,6,9,10</td>
</tr>
<tr>
<td>Infrastrucure development</td>
<td>6,7,8,9</td>
<td>1,2,3,4,5,10</td>
</tr>
</tbody>
</table>

Section-1 (ED): Attitudes towards Educational Development-

The section includes statements asking for opinion on need for sex education, co-education, discipline and for change in educational methods.
The higher score indicates attitude favorable towards education development i.e., more modernistic view.

The lower score indicate views against sex education, co-education, and changed in educational methods, i.e. more conservation view.

**Section-2 (WD): Attitudes towards Women Development**-

This section contains statement asking for opinion on status, equal rights, freedom, development and education for women.

The higher score indicates attitudes favor of equal status and rights education and development for women and freedom to women, i.e., more reformist view.

The lower score indicates lower status, less freedom and less need of education for women i.e., more conservative attitude towards women.

**Section-3(HD): Attitudes towards Health Development**-

This section covers items asking for opinion on various types of superstitions regarding disease and health problems. The section also covers Hence asking for opinion on importance of exercise and yoga in removing health problems than believing in Goddess, saints, fakir and Baba.

The higher score indicates less faith in superstition regarding disease, reformist view.

The lower score indicates more favorable to or faith in superstitions saint, fakir and Baba.

**Section-4(SD): Attitudes towards social Development**-

This section contains items asking for opinion on cast system policy of reservation some social reforms such as dowry, heavy expenses on marriage etc.

The higher score indicates against expenses on dowry, social customs and marriage, less faith in caste system and an unfavorable attitude towards the reservation policy i. e., the reformists or radical view.

The lower score indicates faith in traditional caste system and attitude in favor of expenses on dowry, social customs and marriage i. e., conservative view.
Section-5(ED): Attitudes towards Economic Development-

This section consists of statements asking for opinion on importance of money of life, faith in luck than hard work, desire to earn money etc.

The higher score reflects more favorable attitude towards economic development.

The lower score indicates less faith in hard working, faith in luck and unfavorable attitude towards economic development.

Section-6(ID): Attitudes towards Industrial Development-

This section deals with statements asking for opinions on employment or unemployment through industrial development, environment and industrial development and uses of man power vs machine power in big industries.

The higher score indicates more favorable attitude towards industrial development i.e., modernistic view.

The lower score indicates unfavorable attitude towards industrial development i.e., conservative view.

Section-7(ID): Attitudes towards Infrastructure Development-

This section consists of statements asking for opinions on modern ways of living i.e., fast services of transportation, sanitation and basic facilities like residence, road, gutter and power etc.

The higher score indicate more favorable attitude towards infrastructure development.

The lower score indicates unfavorable, negative attitude towards infrastructure development.

2 Modernization Scale-

Social change is a universal feature of every society. A closer look at the members of a society reveal regularity, stability and persistence in their values, beliefs, attitudes and behaviors, it also demonstrates changes in these aspects of social life. "Society whether viewed structurally or functionally, whether taken as multitude of socio-cultural and socioeconomic forces, whether perceived as a matrix of psycho-social interactional processes, is always passing through dynamic processes of change.". Thus stability and change are complementary hallmarks of every society. India being a developing country, is passing through a period of social change in which modern outlook is gradually

Replacing the traditional ways of life. Describing the nature of this social change, Ruth (1973) writes: "whatever may be the socio-cultural factors of social changes, on the psychological plane, it involves a great conflict between the old and new, the traditions and modernity, the aged and youth, the conservatism and radicalism." From the point of view of
the individual, modernity is the attitude to adjust from one's inner beings to the rapidly changing conditions of socio-cultural and economic milieu.

Some scales have been developed to assess individual's understanding on modernism-traditionalism (often called racialism-conservatism dimension. However, no scale has been developed so far to assess the attitudes toward modernity among youth. The present test has, therefore, been selected for the study in hand. The test measures the attitude towards for aspects of modernity i.e. –

1. Socio-religious
2. Marriage
3. Position of women
4. Education

A Administration and Instruction:

1. It is a self administering inventory; It can be administered individually or in group. The tested is requested to fill in personal in formations as required in scale printed on the first page. The tester reads the instructions while the tested also follows him sub-vocally.

2. After the instructions are over, the tested is asked to register his responses to the various items of the inventory. Though there is no Time limit, usually it takes twenty to twenty five minutes to complete the test. Special care is taken to avoid any omission by the tested.

In this research to measure attitude towards Modernization, modernization scale are used which are made by R.S.Singh, A.N.Tripathi and Ramjilala. Which is in real Hindi but in this research the Gujarati adaptation are used. This scale is 6 point scale and total 32 statements in this scale from strongly agree, Agree, Extremely Agree, Disagree, and Strongly Disagree, Extremely Disagree.

B Scoring

Since the test measures attitudes of modernity in four sub-areas, two types of score can be obtained; (a) area wise modernization score and (b) total score indicating overall modernization. Each sub-area contains both type of items-positive and negative. The Table 1 gives a summary of subareas and serial numbers of the two types of statements.
TABLE-5

Attitudes Sub-area and Serial Numbers of Positive and Negative Items

<table>
<thead>
<tr>
<th>Area</th>
<th>Type of Items</th>
<th>Serial Nos. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Socio-religious</td>
<td>Positive</td>
<td>14,16,19</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>10,17,27,30,31</td>
</tr>
<tr>
<td>B Marriage</td>
<td>Positive</td>
<td>5,21,29</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>4,22,25,28,32</td>
</tr>
<tr>
<td>C Position of women</td>
<td>Positive</td>
<td>6,12,15,24</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>1,11,18,23</td>
</tr>
<tr>
<td>D Education</td>
<td>Positive</td>
<td>13,26</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>2,3,7,8,9,20</td>
</tr>
</tbody>
</table>

The scores to be awarded for different response categories according to the type of statement are given in the following table:

TABLE-6

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Positive Item</th>
<th>Negative-Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely Agree</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Extremely Disagree</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

C Reliability:

The final version of the scale with the items arranged in random order was administered to 100 college students. The mean age of the sample was 19.4. Split-half reliability (Odd-even method) was calculated and after Spearman-Brown's Correlation was found to be r=.78 for the total scale. This demonstrated high reliability of the scale.
D Validity:

1 Face or Content Validity:

This type of validity was demonstrated by 100% agreement among the five judges (all psychologists) regarding the relevance of the items content to the attitudes being measured by the scale.

2 Concurrent Validity:

In order to ascertain concurrent validity, the scores from each subscale were correlated with the scores on the total scale. These values have been given in the Table-3.

**TABLE-7**

<table>
<thead>
<tr>
<th>Sub-Scale</th>
<th>Pearson-r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-religious</td>
<td>.97</td>
</tr>
<tr>
<td>Marriage</td>
<td>.61</td>
</tr>
<tr>
<td>Position of women</td>
<td>.86</td>
</tr>
<tr>
<td>Education</td>
<td>.64</td>
</tr>
</tbody>
</table>

The correlations ranged from .61 to .97. These high correlations demonstrate that sub scales have high validity.

3 Factorial Validity:

Inter sub-correlations were calculated by the Pearson's Product Moment Method. The correlation matrix was factor analyzed by the Thurstone's Centroid method. The results of factor analysis given in Table 4, showed that all the subscales have significant loadings on a common factor. This factor alone accounts for 46% of the total variance which indicated a functional unity among the sub scales which in turn demonstrates high factorial validity.
TABLE-8
First Factor Saturations and Contribution to Total Variance

<table>
<thead>
<tr>
<th>Sub-Scale</th>
<th>Factor loading</th>
<th>Factor Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>.711</td>
<td>.51</td>
</tr>
<tr>
<td>B</td>
<td>.876</td>
<td>.77</td>
</tr>
<tr>
<td>C</td>
<td>.571</td>
<td>.33</td>
</tr>
<tr>
<td>D</td>
<td>.500</td>
<td>.25</td>
</tr>
</tbody>
</table>

Contribution total variance 46%

3.11 Statistical Techniques:-

a. ANOVA (F-Test):

Analysis of variance (abbreviated as ANOVA) is an extremely useful technique concerning researches in the fields of economics, biology, education, psychology, sociology, and business/industry and in researches of several other disciplines. This technique is used when multiple sample cases are involved. Professor R.A. Fisher was the first man to use the term ‘Variance’* and, in fact, it was he who developed a very elaborate theory concerning ANOVA, explaining its usefulness in practical field. ANOVA is essentially a procedure for testing the difference among different groups of data for homogeneity. “The essence of ANOVA is that the total amount of variation in a set of data is broken down into two types, that amount which can be attributed to chance and that amount which can be attributed to specified causes.

b. L.S.D (Least of Significance Difference):

The least of significance difference (L.S.D) test is used in the context of the analysis of variance, when F-ratio suggests rejection of the null hypothesis HO, that is when the difference between the population means is significant. This test helps to identify the populations whose means are statistically different. The basic idea of the test is to compare the populations taken in pairs. It is then used to proceed in a one way or two-way analysis of variance, given that the null hypothesis has already been rejected. The LSD test was developed by Fisher, Ronald Aylmer (1935), who wanted to know which treatments had a significant effect in an analysis of variance.

c. Correlation-r-Techniques:

These techniques have connected the sirfrancies Galton and the ‘r’ test was developed by Karl Pearson’s. Correlation addresses the relationship between two different factors (variables). The statistic is called a correlation coefficient. A correlation coefficient can be
calculated when there are two or more sets of scores for the same individuals or matched groups. A correlation coefficient describes direction (positive or negative) and degree of relationship between two variables. The higher the correlation coefficient, the stronger the relationship. The coefficient also is used to obtain p value indicated whether the degree of relationship is greater than expected by chance. For correlation, the null hypothesis is that the correlation coefficient=0.

As well as to check the relation of attitude towards development and modernization in relation to social. It was also aimed to measure relation of attitude towards development and modernization in relation to social status. For this purpose to check main and internal effect of independent variables. So, correlation was used.