Chapter 3
Method and Procedure of the Study

3.1 Introduction

In the previous chapter the researcher has given a brief account of related literature of concern study.

This chapter deals with method and procedure of the study.

Still today the man does not know everything about the things in the world or happenings on the earth. But he has curiosity to know about them. He always tries to find out the truth behind them than to increase the knowledge, to describe the faint or unclear knowledge and to verify the truth behind the existing knowledge is the object of this effort. This is the natural tendency of every human being. To make the progress and make the life prosperous man always tries his best and for that research is important. In every field research can be done. Likewise research is being used progressively more for making decisions, policies and programs in the field of education.

Research is closely related to the behavior of the human being. To get the expected results is possible but research is a very long process to get the results. If the research is done systematically, then the true results can be acquired. The research includes the selection of sample, process of collecting data, analysis of the data and finally finding the conclusion.

3.2 Meaning of Research

Human beings are the unique product of their creation and evaluation. His nervous system is highly developed. So he has a lot of curiosity about the universe, the different forces of nature etc. The man started studying everything in a scientific way, comparison, analysis and at last he finds out conclusion.

Research means to search again. The word ‘research’ is formed from the two words – re + search. ‘Re’ means ‘again’ and ‘search’ means ‘to find about’. So it can also be said that ‘to find it again’.

Research is a careful investigation. The old facts are examined again, the new facts are searched. Curiosity is the origin of any research. So it can also be stated that research is a search for
knowledge and understanding. It is a search for truth and facts. In research the nature of reasons is inquired, checked the consequences in certain situation and conclusion can be found out.

Sometimes research rejects the old conclusions, theories and modifies them or suggests the new one.

**Definitions of Research**

Many scholars have given different definitions of Research. Following are some of them:

1. D. Slesinger and M. Stephenson in the Encyclopedia of Social Sciences define research as, “The manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether that knowledge aids in contraction of theory or in the practice of an art.”

2. Landberg : “Research is sufficiently objective and systematic to make possible classification, generalization and verification of the data observed.”

3. M. H. Gopal : “It is essentially a systematic inquiry seeking facts through objective verification methods in order to discover the relationship among them and to deduce from them broad principles of law.”

4. Encyclopedia of Social Sciences: “It is the manipulation of things, concepts or symbols for the purpose of generalizing and extend, correct or verify knowledge, whether that knowledge aids in the construction of a theory or in practice of an art.”

In short, research is the search for knowledge through objective and systematic method of finding solution to a problem.

**Characteristics of Research**

Research deals with fact findings. So it has certain characteristics. They are as follows:

1. Research is a scientific programme. It finds out the relation between cause and effect of the problem. It also finds out the solution for the problem.

2. Research states the generalization of principles or theories. It helps to predict about certain problem or situation.

3. Research is based on observation, experience or empirical evidence.

4. Research asks for accurate investigation and description.

5. Research needs deep knowledge of the concerned subject.
6. Research should be objective and logical in which collected data or applied procedure can be verified anywhere, at any time in particular situation.
7. Research is carefully recorded and reported.
8. Research needs patience, courage, perseverance and avoid personal feelings and preferences.
9. Research is a ladder to progress and it increases the progress rate.
10. The main purpose of the research is to serve the human beings.

**Significance of Research**

“All progress is born of inquiry. Doubt is often better than overconfidence, for it leads to inquiry and inquiry leads to invention.”

Hudson Maxim.

Research makes the researcher to think and work scientifically.

Research helps the nations to make or adopt different policies. Facts are studied in the research. Research is useful to find out solutions for various problems from different fields. e.g. Business, industry, social problems etc.

Researcher gives important guideline to everyone and every field of the society. With research good social standard can be developed.

The significance of research can also be understood keeping in view the following points:

1. For the students who write thesis for masters or Ph.D., research may mean careerism or a way to attain a high position in the social structure.
2. To professionals in research methodology, research may mean a source of livelihood.
3. To philosophers and thinkers, research may mean the outlet for new ideas and insights.
4. To literary men and women, research may mean the development of new styles and creative work.
5. To analysts and intellectuals, research may mean the generalization of new theories.

Thus research is important for the new development of any field in better way.

**Motivation Behind the Research**
The researchers have benefits after getting the Research Degree. Different researchers have different views which motivate them to acquire the degree.

Following are some views of motivation:

1. To study as intellectual work.
2. To get benefits regarding the research.
3. To study to solve unsolved problems.
4. To study for initial interest.
5. To research for the good of human being.
6. To acquire top position in the society
7. To fulfill the Government condition.
8. To get knowledge about the unknown.
9. To understand the cause behind the problems and to suggest solutions to the problems.
10. Desire to discover a new and test old scientific procedure.

Many other factors may motivate the people to undertake the research study.

**Objectives of Research**

The research discovers or finds out the truth behind the problem by a scientific way.

The main objectives of the research are

1. Through research the difference between two variables can be tested.
2. To find out certain conclusion.
3. To find out an exact nature of individual, group or particular situation.
4. To acquire new trends in the phenomenon.

**Types of Research**

There are many types of researches. Some of them are as follows

1) **Descriptive Vs. Analytical Type of Research**

In the descriptive type the researcher has to present the things which are happening. He has to inquire about the situation and decide what he exactly wants to achieve. e.g. Research about health habits in the people. To know about it, the researcher has to observe various things such as age, sex, types of exercises, health habits, the time they give for health habits, food,
economic condition of the people etc. He has to make survey of the people and study it comparatively.

In analytical type the researcher analyses the available information. Only this work he performs in analytical type.

2) **Applied Vs. Fundamental**

There are some problems in the society. For the welfare of the society these problems must be solved. In applied research a remedy or solution is found out on such problems. Immediate solution is found out in applied research.

Fundamental research has mathematic approach. In fundamental research the researcher generalizes and formulates the theory. So the findings from fundamental research have broad base of application.

Marketing research is a good example of applied research.

3) **Conceptual Vs. Empirical**

Conceptual research is coordinated with some abstract ideas, views or theory. Philosophers or thinkers use this type of research. They develop new ideas with the help of this type of research.

Empirical research is related to experience or observation. Various information in data forms are included in empirical research. By observing some sample observations, conclusions are observed. This research is considered an authentic support to given hypotheses.

4) **Qualitative Vs. Quantitative**

Quantitative research depends upon quantity or amount. In this type of research the phenomenon is expressed in terms of quantity.

Qualitative research is based on the quality or kind. Qualitative research is used to observe the likes and dislikes, the motivation in the people in the view of their behavior.

5) **Other types of research –**

1. **One time research**

One time research is done for only one period.
2. **Field setting research**  
   This research is related with environmental condition.

3. **Laboratory research**

4. **Clinical research**  
   This research is done by taking samples. This is deeply studied to find out causes of the problem.

5. **Exploratory research**  
   Development of hypotheses is included in this research.

6. **Historical research**  
   This type of research is done while the scrutiny of historical documents, past events etc. can be done.

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**Research Problem**  

The researcher starts his research work due to certain reasons. Without the problem research is not possible. To find out the truth, research is important.

To define a research problem, some features must be considered:

1. It is necessary to define clearly the statistical and technical terms.
2. The researcher must fix the assumptions and define them clearly.
3. To decide the material for investigation.
4. It is important to define clearly the scope of the research problem.

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**Selecting the Problem**  

It is very difficult to select the research problem. The researcher must go through the subject and problem for the research and he must see that the situation is firm in his mind.

When the researcher selects the problem, he considers some points:

1. The research problem should be new. Much work should not be already done on the research work.
2. Problem must be clear.
3. It should be considered that the subject of the research work must be easy, workable.

There must be possibility to collect much information.
4. Research work should not be expensive and time consuming. For the research money and time both must be taken into consideration.

5. Before choosing any research problem preliminary study is very important.

3.3 Research Design of the Study

Research design shows the exact systematic nature of the research work. It includes the framework of study, availability of various data, sampling observations, analysis, findings etc. Research design is the structure of research work. It is an outline of research work.

The researcher can organize his ideas in a certain form with the help of the research design.

Important things for good research design:

1. The researcher must have ability to get necessary information related to problem.
2. The researcher should have necessary skill.
3. Time and money factor should be taken into consideration.

Research design has two groups:

1. Exploratory design
2. Descriptive type design

There are sub-sections also in the above two types.

Exploratory Design includes

1. Sampling Design
2. Statistical Design
3. Observational Design
4. Operational Design

Descriptive Design includes

1. Rigid Design
2. Probability Sampling Design
3. Preplanned Design for Analysis
4. Structured Design
5. Advanced Decisions Design

The Research Design of the present study is a Descriptive Design.

3.4 Justification of the Study
There are some separate schools for girls as well as some co-education schools. There may be similarity or difference in the personalities of girls studying in these schools. To study the personality factors comparatively this study is necessary.

To find out particular difference or similarity in the thoughts, emotions, behavior in these girls, this research study is important.

From this study, proper inference can be find out which will be helpful for parents as well as in any policy making.

3.5 Statement of the Problem


3.6 Definition of the Important Terms

1. Personality
   Conceptual Definition
   “Personality is the sum total of all biological innate dispositions, impulses, tendencies, appetites and instincts of the individual and the acquired dispositions and tendencies.”
   Morton Prince
   Modern Educational Psychology, Dr. R. N. Safaya et. al.

   Operational Definition
   “The study of personalities of adolescent girls studying in separate secondary schools for girls and girls studying in co-educational secondary schools.

2. Adolescent period or Adolescence
   Conceptual Definition
   “Adolescence is that span of years during which boys and girls move from childhood to adulthood, mentally, emotionally, socially and physically.”
   Jersield, A.T.
   A Textbook of Educational Psychology, Bhatiya & Bhatiya

   Operational Definition
“The period from life of girls selected by the researcher for study.

3. Secondary Schools  
**Conceptual Definition**  
The level of education in which the students study in 9<sup>th</sup> and 10<sup>th</sup> standard that means up to secondary school certificate examination.  
**Operational Definition**  
The researcher has taken the 9<sup>th</sup> and 10<sup>th</sup> standards for her research study.

4. Sangli District  
**Conceptual Definition**  
A district in Maharashtra State at its Western side famous for turmeric and grapes.  
**Operational Definition**  
The researcher has considered Sangli district for her research.

5. Separate school for girls  
**Conceptual Definition**  
The type of school where the admission is given to only girls for education.  
**Operational Definition**  
A type of school the researcher has chosen for her research study.

6. Co-education School  
**Conceptual Definition**  
The type of school where both girls and boys have given admission for education.  
**Operational Definition**  
Another type of school the researcher has selected for her research work.

7. Comparative Study  
**Conceptual Definition**
Operational Definition

A study method used by the researcher for her research to understand the difference between the personalities of girls in both types of schools.

3.7 Objectives of the Proposed Research Study

1. To study about the personality of adolescent girls studying in separate secondary schools for girls.
2. To study about the personality of adolescent girls studying in co-education secondary schools.
3. To study comparatively about the personality of adolescent girls studying in separate secondary schools for girls and co-education secondary schools according to various elements.

3.8 The Hypothesis

When the researcher confirms the problem of his research study, then the next important step is formulation of hypothesis. For the research study, hypothesis formulation is very necessary. In this step the researcher thinks of some tentative answers or assertions. He decides some probable solutions for his research problem.

These answers or assertions give guideline to the researcher for his research. Whether his assumptions are true or not that is different thing. After observing or analyzing the data it can be cleared. If the analyzed data is consistent with the hypothesis, then the hypothesis gets accepted. If the analyzed data is not consistent, the hypothesis gets rejected. Due to the hypothesis, the researcher can make a link between the theory and the investigation. The researcher can also get additional knowledge concerned with his problem.

Meaning of Hypothesis:
The statement of hypothesis is a relation between two or more variables. It declares relation between variables generally or specifically.

The word hypothesis consists of two words:

\[
\text{Hypo} + \text{thesis} = \text{Hypothesis}
\]

‘Hypo’ means tentative subject to the verification. ‘Thesis’ means statement about solution of a problem.

In hypothesis the researcher initially makes some assumptions. The hypothesis is the statement in which the researcher imagines about the answers or solutions to his research problem that means hypothesis is a guess of the previous knowledge of the researcher. With the help of hypothesis, the researcher can get access to find out solution to his research problem.

**Definitions of Hypothesis**:

Some scholars have defined the term hypothesis as follows:

i. Rummel and Balline defines hypothesis, “A statement capable of being tested and thereby verified or rejected.”

ii. M. H. Gopal says, “It has been defined as a tentative solution posed on a cursory observation of known and available data and adopted provisionally to explain certain events and to guide in the investigation of others. It is in fact a possible solution to the problem.”

iii. J. W. Best defines, “It is a shrewd guess or inference that is formulated and provisionally adopted to explain observed facts or conditions and to guide in further investigation.”

By studying various definitions, it clears that hypothesis is very important. It is a key to solve problem in a scientific way. Without hypothesis the researcher can not go forward in the research process.

**Characteristics of Hypothesis**

Goode and Hatt discussed the main characteristic of hypothesis. They are given as below:

1. The researcher must explain the hypothesis clearly so that it can be accepted by all.
2. The statement of hypothesis clears the purpose of the research.
3. The statement of hypothesis must assure that the research is practical and significant.
4. Available techniques should be used for hypothesis testing to make good formulation of hypothesis.
5. The researcher should formulate a hypothesis related to body of existing theory. In the beginning, the researcher may select the subject of his own interest. Then afterwards it becomes difficult to develop the research as every study is an isolated survey.

Sources of Hypothesis

To develop the hypothesis the researcher applies various sources. Following are the sources of a hypothesis:
1. The researcher can formulate the hypothesis from his own experience.
2. He may find it out from the study of any other researcher or researchers.
3. He may formulate the hypothesis based on certain theory, discussions, terminology etc.

Functions of Hypothesis

Hypothesis gives clear and proper description of the facts concerned with hypothesis.
1. It suggests the researcher proper experiments, methods to discover the fact.
2. Hypothesis encourages the researcher for observation.
3. It helps the researcher to find out method of verification which is economic cost-wise as well as considering time and efforts.
4. If the hypothesis is formulated in the beginning, it helps the researcher for appropriate explanation.
5. From the formulation of hypothesis, it becomes easier for the researcher to guess about the conclusion and inferences.
6. The use of hypothesis helps the researcher to collect relevant data for his research study.

Criteria for a Workable Hypothesis

The hypothesis must be workable. Some conditions should be applied properly to make the hypothesis workable.
1. It must be possible to test the hypothesis empirically.
2. The concepts in the hypothesis must be clear. There should not be any ambiguity. Such hypothesis can be commonly accepted and it is possible to communicate them with others.
3. The hypothesis must be relevant to the research problem.
4. The hypothesis should be a bridge between it and other theories.
5. The hypothesis must help in elaboration, extension and improvement in a theory.

The Types of Hypothesis

Hypothesis is classified in many ways. Following are types of hypothesis:

1. The Research Hypothesis
   The scientific research hypothesis is a formal affirmative sentence. It predicts about the research outcome which the researcher wants to test.

2. The Null Hypothesis (Ho)
   Null stands for zero. When the hypothesis is negatively stated, it is called as null hypothesis. It is tested against the alternative hypothesis. Null hypothesis is denoted by the symbol Ho. After collecting the data statistical techniques are used to analyze the data. Hypothesis can be accepted or rejected according to the values received from statistical analysis. This is the evidence to determine about the hypothesis.

Hypothesis for the proposed research

1. The personality of adolescent girls studying in separate secondary schools for girls is different from the personality of girls studying in co-education secondary schools.

2. Null Hypothesis
   a) There is no difference between the personality of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.
   b) There is no significant difference between low level psychoticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.
   c) There is no significant difference between average level psychoticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.
d) There is no significant difference between greater level psychoticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

e) There is no significant difference between low level extraversion character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

f) There is no significant difference between average level extraversion character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

g) There is no significant difference between greater level extraversion character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

h) There is no significant difference between low level neuroticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

i) There is no significant difference between average level neuroticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

j) There is no significant difference between greater level neuroticism character of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

Thus formulation of hypothesis is very important in research study to guide the researcher to find out the appropriate answer or solution for his research problem.

3.9 Scope of the Study

1. In this research the secondary schools in Sangli District are taken into consideration.

2. In this research study the personality of girls studying in separate schools for girls and girls studying in co-education schools is considered.

3. For this research std. 9th and 10th are considered.
3.10 Study Region

For the research study, Sangli District is selected. Sangli District is in the Western part of the Maharashtra State. The district is advanced in educational field.

Fig. 3 Study Region

3.11 Utility

We see the importance is given to women’s education. Now a days, women have given equal status with men. They are working in almost all fields with men. For this, it is necessary to develop all round personality of girls from the school level.
In this research, the researcher is going to study about the personality of adolescent girls studying in separate secondary schools for girls and the girls studying in co-education secondary schools.

At this stage of adolescence, so many changes take place among the girls – physical, mental, emotional, social. The girls have attraction of opposite sex. They need love and security. Their mind is confused.

Naturally, there must be difference between the personality of girls studying in separate schools for girls and the girls studying in co-educational schools. The development of personality of girls in these two types is surely different. So, what is the actual difference must be seen and for that, it is necessary to find out the difference between the personalities of girls studying in both types of schools. And so is the importance of research. From the research, inference can be found out.

3.12 Limitations of the study

1. The research is limited to Sangli District only.
2. The research is limited to adolescent girls studying in 9th and 10th std. in Sangli District.
3. The research is limited for the personality factors Extraversion, Neuroticism and Psychoticism.
4. The research is limited for the personality of adolescent girls studying in separate secondary schools for girls and girls studying in co-education secondary schools.

3.13 Research Methods

While performing the research operation the researcher uses some methods or techniques. They are called as research methods.

Paradigms of Research

According to Webster’s New World Dictionary, a paradigm is a pattern, example or model.

It is a frame of reference or a perspective for analyzing or examining the educational world consisting of set of concepts and assumptions. Paradigm differs in terms of values and assumptions.
In the field of educational research there are three paradigms: quantitative paradigm, qualitative paradigm, and analytical paradigm.

Empirical Research Paradigm

Qualitative Research
- 1. Ethnography
- 2. Phenomenological Study
- 3. Grounded Theory
- 4. Case Study

Quantitative Research
- 1. Pre-experimental
- 2. True experimental Study
- 3. Quasi experimental
- 4. Single Subject design

Interpretative Research
- 1. Survey
- 2. Correlational
- 3. Causal

Research Methods

The research is concerned with three objectives – theoretical, factual and application. He achieves these objectives by using various research methods. It is necessary for the research scholar to understand about the term method and the planning of the research.
Meaning and Definition of Research Method

According to the nature of the research problem specific pattern is used to conduct a research work is the method of research.

M. Verma stated that “Method is only in the abstract as logical entities that we can distinguish between matter and methods, in reality, they form an organic whole and matter determines method analogously as objective determines means and content and spirit determine style and form in literature.”

According to M. Verma, for theoretical problems survey and experimental methods can be used.

Historical method, case study method, and genetic method are used to solve factual problem.

Action research is used to find out solution on application problems.

Research Methods are of following types:
1. Historical Method
2. Experimental Method
3. Survey Method

1. Historical Method:

History is related with past events. In this method the present events are studied but for these events past references are taken.

Historical data can be collected from books, magazines, documents, papers, literature, memories, personal letters, diaries, diplomatic agreements, historical paintings, portraits, charts, maps, authentic witnesses etc.

2. Experimental Method:

This method is mostly used for the research in physical science. The subject matter is treated in laboratory in controlled condition and the inferences are found out.

In experimental method, the experiment is a proof of hypothesis. The causal relationship between two factors can be examined with controlled observation.
Experimental method is similar to scientific method in many respects. This method should be used by researcher more and more because the hypothesis can be tested and verified at any time.

3. Survey Method:

Survey method analyses, interprets and reports the present status of any social group, institution or area. With the help of survey the social conditions, relationship, behaviour can be studied and useful solution can be searched out on these problems.

Survey method is categorized as follows:
1. Descriptive Survey Method
2. Analytical Survey Method
3. School Survey Method
4. Genetic Survey Method

Survey testing method, Questionnaire survey method, Interview survey method these methods are included in descriptive survey method.

Analytical survey method includes Observational survey, Rating survey, Documentary frequency, Critical incident, factor analysis.

3.14 Research Methodology

The researcher must know the method as well as methodology for the research problem. So the researcher should design his methodology for his problem.

With the help of research methodology the researcher can find out solution of his problem on scientific base whereas research method is just a part of research methodology. This means research methodology has wider scope as compared to research methods.

3.15 Method Applied for the Proposed Study

The aim of the research problem selected by the researcher is to study the present condition in the study region. This research is related to present situation. So the researcher has used Survey Method for the study.

Descriptive Survey Method
Survey method is used widely for researches. Through a survey of small sampled population or also of a broad sampled population, the researcher investigates certain aspects.

In the word ‘survey’ there are two words – ‘sur’ or ‘sor’ means ‘over’ and ‘veeir’ or ‘veior’ means ‘see’.

Whatever exists in the present is described and explained in the survey method. Some conditions, relationships, certain practices, beliefs, views, attitudes, some processes and their influences or developing trends etc. are included in normative or descriptive survey.

**Definition**

“Survey means the research or investigation of educational problem using scientific methods of sampling and carefully planned methods of questions.”


“The survey method gathers data from relatively large number of cases of a particular time. It is not concerned with characteristics of individuals as individuals. It is concerned with the generalized statistics that result when data is abstracted from a number of individual cases. It is essentially cross sectional.”

- John W. Best

(Pg. No. 117, Research in Education)

In survey method, problem and its correlation can be showed. The proper reasons of the problem are searched. The survey is an important type of study. It involves a clearly defined problem and definite objectives. Skillful and imaginative planning, cautious analysis and explanation of data gathered and logical and expertise reporting of the findings are required for survey method.

**Aims and Uses of Survey Method**

The following are the main aims and uses of survey method:
1. To explain the difficulty of phenomenon.
2. Surveys are done as an introductory step of the next vast research.
3. To get information about human behavior directly.
4. Helps in future planning or to take the decisions in any field.
5. To find out solution to different problems regarding various issues e.g. problems in school related to staff, teaching staff, curriculum, school maintenance.

**Steps of conducting a Survey**

The steps are as follows

1. Stating the problem
2. Identify research questions
3. Selecting participants
4. Constructing the questionnaire
5. Pre-testing
6. Preparing the cover letter
7. Collecting data
8. Dealing with non response

By using all these steps the researcher can collect required information for the research.

This information mainly gives knowledge in three aspects.

At first the survey gives information about exact present condition.

Secondly, from the collected information, it becomes easier to reach at the goal as well as to study about same situations at different places.

Lastly, through survey by collecting experiences of others or by experts’ opinions, the information is collected to achieve the goal.

**Types of questions in Survey Research**

- Demographic Questions (gender, marital status, education, age, income)
- Retrospective Reports.
- Satisfaction and Intention questions.
- Closing comments.
**Important Features of the Survey Method**

Survey method of research has some important features. They are:

1. Possible to collect large number of data.
2. Never related with individual characteristics.
3. Helps to define the problem clearly.
4. Skillful imaginative planning is necessary.
5. Needs exact objectives.
6. Needs cautious analysis and explanation of the collected data.
7. Needs logical and skillful reporting about the findings.
8. Surveys change in intricacy greatly.
9. It does not look for the development of an original body of scientific principles.
10. It gives information to find out useful solution for local problems.
11. It gives advanced knowledge.
12. It suggests the planning for future development.
13. It gives information about the present tendency and sort out the present problems.
14. It helps to apply the various tools for the research.
15. Survey method is essentially a representative.

**Types of survey studies**

This can be classified as follows:

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<th>Types of Survey Studies</th>
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<td>1. Nature of Variables</td>
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<tr>
<td>i) Status Survey</td>
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<td>ii) Survey Research</td>
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<td>2. Group</td>
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<td>i) Sample</td>
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<td>ii) Population</td>
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<td>3. Source of data collection</td>
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<td>i) Questionnaire</td>
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<td>The School Surveys</td>
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The school surveys are concerned with the problems in educational field. The school surveys can be done for following purposes:
1. To decide the aims and objectives of the school for progress of pupils as well as entire school.
2. To solve the problems in administration and find out required solution.
3. To plan for the progress of the school.
4. To plan for financial policies and procedures.
5. To chalk out guideline for the pupils’ achievement, implementation of effective communication, useful instructional methods and teaching aids.
6. To solve the problems of staff, pupils and other related persons.
7. To solve maintenance problems.
8. To plan the useful programmes for overall development of personality of students as well as staff.

**The personality Testing**

It is difficult to define, analyze and measure the personality. So instead of measurement of personality, personality assessment is carried out to examine the personality.

For personality assessment various tools and techniques are used such as questionnaire, interview, observation, check-list, rating scale etc.

School appraisal studies are also included in personality testing. As so many factors are related to schools, there is vast scope of school survey in different parts.

**Mainly survey takes place**

1. To know about achievement.
2. To understand intelligence level.
3. To know about personality.
4. For school appraisal.
5. To study about status.
6. To study about financial condition.
7. To study curriculum.
8. To study about building.

Present Study is related to Personality Testing. For the present study the researcher has used Descriptive Survey Research Method.
Descriptive Studies

This type of research studies about the present condition and by proper investigation tries to decide the present condition of the problem or phenomenon.

Descriptive research takes place for following purposes:

1. To know about the present condition.
2. To know about present needs.
3. To understand about the present status of the phenomenon.
4. To find out the facts.
5. To study the relationship between present trends and patterns.

The researcher can achieve his goal by applying descriptive survey because this method is more realistic than experimental method of research.

Problems of Descriptive Research

1. It is difficult to select size of the expected sample.
2. It is difficult to select and use acceptable measuring instruments.

Types of Descriptive Research

There are some types of Descriptive Research. They are –

1. The Survey Testing Research
2. The Questionnaire
3. Interview

The Survey Testing Research is applied to solve academic and psychological problems. By using Academic and Psychological Tests, the data is collected. There are some problems while administrating these tests as selection of proper test, validity of tool, in case as unavailability of tool the researcher has to construct the tool by using standard norms etc.

Besides some problems in administration of survey, this method is much more realistic and so can be used widely.

Use of Survey Testing Results

Survey testing, as a research activity usually is interested in evaluating the achievement of a class, a school, relationship of variable, educational and vocational guidance and weakness
of scholar’s programme. It can be used evolving the criterion of admission and selection. These researches can be used as policy discussions.

**Important Features of Survey Testing Research**

The important features of the Survey Testing Research are

1. It is more scientific and correct.
2. Possible to collect more accurate data.
3. The measurement and sampling can be reduced to the minimum.
4. The findings are more realistic and accurate.
5. The conclusions are accurate.

**Questionnaire Survey**

Questionnaire Survey is a research tool to collect data. This is widely used in Descriptive Type of Research. By applying Questionnaire Survey Method, the researcher can collect ample data easily and find out the results or solutions to the problem.

It saves money, time and energy.

The results got are more valid as it represents large sample.

There are some problems in the Questionnaire Survey. They are

1. Difficult to plan a questionnaire.
2. Less possibility to get adequate answers.
3. Possibility to get doubtful information.
4. Sometimes data analysis is difficult.
5. Choosing large and representative sample.

Due to these problems, the questionnaire survey has some disadvantages such as

1. Possibility of incorrect interpretation of the question by the respondent.
2. Mailed questionnaire are mostly objective.
3. The credibility of the questionnaire is usually neglected.

**3.16 Sources of Data collection**

In the research process, collection of data is a very important work. Data is of two types:

1. Primary Data.
2. Secondary Data.

**Primary Data**

It is the information which is collected by the researcher at first time. Primary data is collected fresh and for the first time. So it is original in nature.

There are some methods of collecting primary data. They are:

a) **Observation Method**

Investigator himself observes directly in this method. But this method needs a lot of money and collects very limited information required for the research work.

b) **Interview Method**

1. **Personal Interview** :

   By face to face contact with persons selected for the interview, the data is collected. This is also expensive. It takes a lot of time and rather difficult.

2. **Telephone Interview** :

   If the persons who are selected for the interview are outside the area of the interviewer, this method is very useful to collect the data. In this method, the interviewer can record the replies. It is less expensive but by this method the researcher cannot talk with the person for a long time to collect the data.

c) **Questionnaire Method** :

   For big investigations, questionnaire method is very useful. In this method printed questionnaire is given to the respondents to answer in Yes /No forms. This method is not expensive and possible to collect more data easily.

**Secondary Data**

Secondary data is already published information or unpublished information. This data is collected by others. After the use of primary data, it loses its originality and becomes secondary. The secondary data can be collected from newspapers, periodicals, journals, books, magazines, public records. The unpublished data can be collected from the government or private offices, research institutions etc. While collecting the secondary data, the researcher must take precaution of the following things:

1. The researcher must see the usefulness of the secondary data.

2. He must clarify the reliability of the data.
3. He must confirm that if the available data is suitable for the subject matter at different stages.
4. He must see that whether the collected data is adequate or not.

**Selection of Appropriate Method of Data Collection**

The selection of an appropriate method of data collection can be decided as per the nature of the research problem. It depends upon the nature and scope of the problem and also the object of enquiry. Availability of money, time and precision factor are seen while selecting the method.

The researcher must see that the method must be related to the research problem. The capability and experience of the researcher are also very important in choosing the method of data collection.

**3.17 Population**

In educational research, collection of data is an important activity. From the vast population, a small segment i.e. sample needs to be studied.

Population is the group of interest to the researcher. It is the group to which the results of the research study will ideally generalize. It is group of units that have one or more features in common.

**Sample**

For the collection of data, the researcher selects sample from population. Sample is a small part of population. The researcher studies the sample, finds out the inferences and generalizes them for the entire population from which it is taken.

**Sampling Method**

**Meaning and Definition of Sampling**

A sample is a representative of the entire population. It is not possible to study the whole universe. So the research can be undertaken on a smaller group i.e. sample from that population and the results are drawn.

Sampling is just a process with which the researcher learns about the entire population by studying small group selected from that population.

**Definitions**
According to W.G. Cochran,

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

David S. Fox says, “In the social sciences, it is not possible to collect data from every respondent relevant to our study but only from fractional pan of the respondents the process of selecting the fractional pan is called sampling.”

**Need of Sampling**

1. To minimize the time required.
2. To minimize the cost of the research.
3. To become useful for the trained researcher.
4. To find out accurate and reliable information related to characteristic of the entire universe.

**Main Steps in a Sample Survey**

The researcher makes planning of sample survey and then executes it accordingly. Following are the main steps in a planning and executing the sample survey:

1. **Objective and Scope of the Survey**
   
   In this first step the investigator defines the objectives and scope of the survey. It helps him in collecting the appropriate data and using the statistical tools.

2. **To define the Sampled Universe**
   
   It is necessary to define the universe from which the sample is taken. It should be clearly stated.

3. **To Select the Sample**
   
   The investigator must decide the size of the sample. He must select proper sampling method.

   a) **To define sample unit**:
      
      Before taking the sample, the researcher should decide the unit of the sample which can be clearly defined. It must be appropriate to collect the data for the research study.

   b) **Sample Frame**:
The researcher must draw a map or make a list of other acceptable material which can guide him for selecting the population. A good sample frame results in an accurate sample survey.

c) **Size of the Sample:**

For detailed study large sample is not useful. Size of the sample directly affects the results. The size of the sample should not be so large as well as so small. It must be optimum. The researcher should determine it in a scientific manner using appropriate approaches.

d) **To Select Proper Sampling Method:**

According to the objectives of the survey, the investigator must select proper sampling method. He must keep in mind about the nature of population, expenses and time available while selecting the method.

4. **To Collect the Data**

For collecting the data the researcher should prepare or select the appropriate questionnaire. It is a greatly specialized work.

5. **Organization of Field Work**

To get accurate results, the researcher should organize the field work properly. He should appoint the trained and experienced staff to conduct the survey.

6. **Pilot Survey**

Before starting the main survey, the researcher should conduct a pilot survey. It is useful for him to estimate the cost, time period, improve the organization of field work.

7. **Analysis of Data**

To analyze the data, the investigator should select proper statistical technique which has minimum errors.

8. **Reporting**

This is the last step. In a good report there is detailed information about the survey.

**Functions of Population and Sampling**
Research work is guided by inductive thinking. The researcher proceeds from specificity to generalization. The sample observation is the specificity and its application to the population is generalization.

The sampling is the fundamental to all statistical techniques and statistical analysis. The measures of a sample are known as parameters Mean, standard deviation and co-efficient of correlation of sample observation are known as statistics and mean S.D. and co-efficient of correlation of population are known as parameters. In research work generalization is made by estimating parameters on the basis of sample statistics.

**Types of Sampling Techniques**

To draw a sample plan different types of sampling techniques are used. These various method are broadly divided into two types

1. **Probability Sampling**
2. **Non-probability Sampling**

1. **Probability Sampling**

In probability sampling, the sampling is drawn from the population according to certain pattern. Everyone has equal probability to select as sample in this type of sampling. Random sampling, systematic sampling, stratified sampling, cluster sampling, multi-stage sampling and area sampling are considered as probability sampling.

2. **Non-probability Sampling**

This type of sampling is also called judgement sampling. It is based on the personal judgement. In this method the required number of sample units is selected purposely as per the object of enquiry. Personal opinions or thoughts make impact on this type of sampling. Purposive sampling, quota sampling and convenience sampling are included in non-probability sampling.

**Random Sampling**

In random sampling each item from the population has equal chance to get selected.

W. M. Harper says, “A random sample is a sample selected in such a way that every item in the population has an equal chance of being included.”
For homogeneous and comparatively larger groups, random sampling is more convenient.

Selection on Random Sample
Generally following methods are used to select the sample randomly:

1. Simple Random Sampling
   In this method each unit in the population gets equal chance to get selected. From statistical table the numbers are selected randomly.

2. Stratified Sampling
   In this method of sampling the sample is selected from the population which is divided into different strata. These strata are based on certain attributes. Sample from each strata is selected proportionately. The stratified sampling represents adequately for each strata in a population.

3. Two Stage Sampling
   In this method the sample is selected in two stages. In the first stage certain strata are selected randomly. In the second stage, from the selected strata in the first stage again few units are chosen randomly. This selects the sample.

   Two staged sampling sometimes can be used as multistage sampling. Here the numbers of stages are more than two.

4. Cluster Sampling
   In this type of sampling the population is divided into a number of clusters. A few clusters are chosen randomly. The chosen clusters are treated as sample.

Precautions in Drawing a Random Sample
   While drawing a random sample, the researcher should take following precautions:
   1. Sample can be taken from the population and the researcher must define each unit clearly.
   2. Different units should have nearly equal size.
   3. Each unit must be independent.
   4. Sample selection method must be independent.
   5. Every unit must have access. Once selected unit should not be replaced by any other unit of the population.
Merits of Random Sampling Method
Following are the merits of random sampling method:

1. It is a more scientific method. Sample taken from the population is away from personal judgement.
2. Previous knowledge of the characteristics of the population is not required.
3. Assessment of accurate results is possible.
4. The sample drawn through this method truly represents the population.
5. It is very simple and easy method.
6. This method gives most reliable and more information, It saves cost, time and labour.

Demerits of Random Sampling Method
While drawing sample through this method, there are some practical difficulties and also certain limitations.

1. A complete list of population is required in sampling method. But no such up to date list is available. As the list of many enquiries is available, it restricts the use of this method.
2. The selected small size cannot represent the universe.
3. If the selected sample is large, it scatters widely and so it becomes time consuming and costly.
4. Sometimes probability of results is very small.
5. For a certain level of accuracy this method usually needs large sample as compared to stratified sampling.

Selection of sample for the proposed study.
This research is related with secondary schools. Schools are selected from Sangli District. In this both separate secondary schools for Girls and co-educational secondary schools have been included.
3.18 Tools and Techniques of Data Collection

Techniques of Data Collection

There are three major techniques of data collection as follows
1. Observation technique  
2. Interview technique  
3. Projective technique  

The following chart can show the sub techniques of each major technique.

<table>
<thead>
<tr>
<th>Techniques of Data Collection</th>
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<tbody>
<tr>
<td>1. Observation Technique</td>
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<td>2. Interview Technique</td>
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<td>3. Projective Technique</td>
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<tr>
<td>1. Participant Observation</td>
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<tr>
<td>3. Use of Audio Or Video</td>
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<td>1. Face to face interview</td>
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<tr>
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<td>9. Unstructured interview</td>
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<tr>
<td>10. Semi-structured interview</td>
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<tr>
<td>1. Rorschach ink blot Test</td>
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<tr>
<td>2. React to words</td>
</tr>
<tr>
<td>3. Make a story</td>
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<tr>
<td>4. Draw self portrait</td>
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<tr>
<td>5. Sentence completion</td>
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<tr>
<td>6. Ordering sequentially</td>
</tr>
</tbody>
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Tools of Data Collection  
1. Observation  
2. Interview  
3. Questionnaire  
4. Achievement test  
5. Aptitude Test  
6. Rating Scale  
7. Interest Inventories  
8. Personality Inventories  
9. Projective devices  
10. Sociometry
With the help of above tools data is collected. The researcher has chosen Eysenck’s Personality Inventory for data collection for the proposed study.

We can test the personality factors through this inventory.

**Personality Inventory –**

Personality Inventory is specially designed to seek answers about the person and his personality.

It is a standard set of questions about some aspects of personality of the individual or his life history.

Thus an inventory is personal and different from a questionnaire, which is of general nature.

“Personality tests are the instruments for the measurement of emotional, motivational, interpersonal and attitudinal characteristics as distinguished from abilities.”

- Anatusky (1988)

**Types of Personality Tests**

1) Non Projective Personality Test
2) Projective Personality Test

**1) Non Projective Personality Test**

a) Personality Inventory
b) Creating Test
c) Achievement Test
d) Interest Inventories

“Personality Inventories are self rating questionnaires that deal not only with over behavior e.g. insisting on one’s way, emotional expression, sympathetic acts but also with the person’s own feelings about himself, other persons and his environment resulting from introspection (Liking to be alone and living introvert, need for praise, repression for desire, caution and worry)”

In Personality Inventory the questions are based upon the external behavior of a person and his views about himself, about others, his environment and emotions. The correspondent has to answer the questions by his self observation.
Characteristics of Standardized Personality Inventory

1. This helps to analyze the personality.
2. It saves time and money.
3. The data collected through standardized tests is more believable.
4. If the same inventory is used for two studies, the results can be compared.
5. Other researchers can verify the results by using the same test.
6. With the help of these inventories, general principles of behavior can be found out.
7. Behavioral problems can be diagnosed.
8. Future behavior of a person can be predicted.
9. Its validity or reliability with respect to objective can be tested.

Administration of Tool

After the selection of problem at first the researcher studied about the background of the problem. Then she made research outline according to the objective related to the problem. Then proper Survey Method has been used. For the survey, secondary schools from Sangli District have been chosen. Related to research problem the separate secondary schools for girls and co-education secondary schools have been chosen.

Researcher has translated Eysenck’s Personality Inventory into the mother tongue of the students. It is then checked and made corrected by the guide.

Twenty schools are selected. Day, date and time have been fixed from the school principal to collect the data.

3.19 Conclusion

In this chapter, the proposed study, research methods have been considered. What is research; educational research, objectives, need, importance, hypothesis, scope, motivational research, survey method, research design, tools and all such elements are discussed.

The next chapter is devoted to the analysis of collected data, interpretation of data.