Chapter 3

METHODOLOGY

Methodology is the logic of scientific investigation. It is a procedure of research techniques. Methodology means description, explanation and justification of methods and not the method themselves. It contains the standard and principles employed to guide and choice structure process and use of methods as directed by the underlying paradigm. The methodology has been presented in this chapter under the following heads-

- **Hypotheses**
- **Research design**
- **Method used**
- **Locale of the study**
- **Sampling techniques**
- **Selection of schools**
- **Sample size and distribution**
- **Process of data collection**
- **Variables under study and their measurement**
- **Pilot study**
- **Tool used for the study**
- **Statistics used for analysis and interpretation of data.**

3.1 Hypotheses:

Ho: there is no significant association between different demographic variables (gender, class, ordinal position, no of children, fathers' education, mothers' education, monthly income, type of family, and type of school) and study habits.

H1: there is significant association between different demographic variables (gender, class, ordinal position, fathers' education, mothers' education monthly income, no of children, type of family, and type of school) and study habits.

3.2 Research design: A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The study was descriptive in nature, which refers to the describing the characteristics of a particular individual, or of a group. The description is made on the basis of scientific observation; hence it is suppose to be more accurate and precise then casual.

3.3 Method used: Survey method was used to conduct the research. It is the method which involve a systematic and in-depth study of a particular neighborhood, group etc., with a view to the analysis of social problem and presentation of recommendations for its solutions.

3.4 Locale: The study was conducted in Haldwani city of Uttrakhand. Uttrakhand, formerly uttaranchal, is a state in the northern part of india. It is often referred to as the Devbhumi due to the many Hindu temples found throughout the state. Uttrakhand is between latitude 30.33°N and longitude 78.06° E. The state of uttrakhand has an area of 53,483 sq.km and a population according to the 2011 census stand at about 10 million, making it the 20th most populated state in india. There are 13 districts, 95 blocks, 7256 panchayat and 15751 villages. Uttrakhand is one of the smallest states in the country. The density of population per sq. km. is about 189 and fairly below the national average.

Haldwani is the third most populous city in Uttrakhand (after Dehradun and Haridwar), and is known as the "Gateway of Kumaon". Population of Haldwani in 2011 is 156,078; of which male and female are 81,955 and 74,123 respectively. Haldwani has a sex ratio of 912 females for every 1000 males and a literacy rate of 77.32%.

The area was purposively selected due to the following reason. Firstly, no authentic efforts had been made to study this problem in Haldwani city. Secondly, researcher is a resident of Haldwani which provide ease to researcher in collecting data as researcher aware of local resources and in collecting the reliable data also.

3.1 Topographical location of the study area

Schools (Abbreviation)	Full form
BSS	Beersheba.Sr.Sec School
GTB	Guru Teg Bahadur School
QP	Queens Public School
GJHK	Government Junior High School Kamalwaganj
GICL	Government Inter College Lamachaur
BNJH	Bal Nilyam Junior High School

3.1 Major abbreviations

3.5 Sampling techniques(Selection of schools): The researcher conveniently selected six co-ed different schools namely Beersheba. Sr. Sec School, Guru Teg Bahadur School, Queens public School, government inter college lamachaur, Government junior high school Kamalwaganja, BalNilyam junior high school belonging to Government or Private school. The above mentioned schools were selected by making list of 10 most approachable schools and after telephonic conversation with the authorities, those schools from where permission was given were finally selected.

3.5.1 Selection of respondents

The researcher was selected all the available students of 6th and 8th standard of above mentioned six different Government/ Private school. So finally the total sample size undertaken for the study was 1116 students.
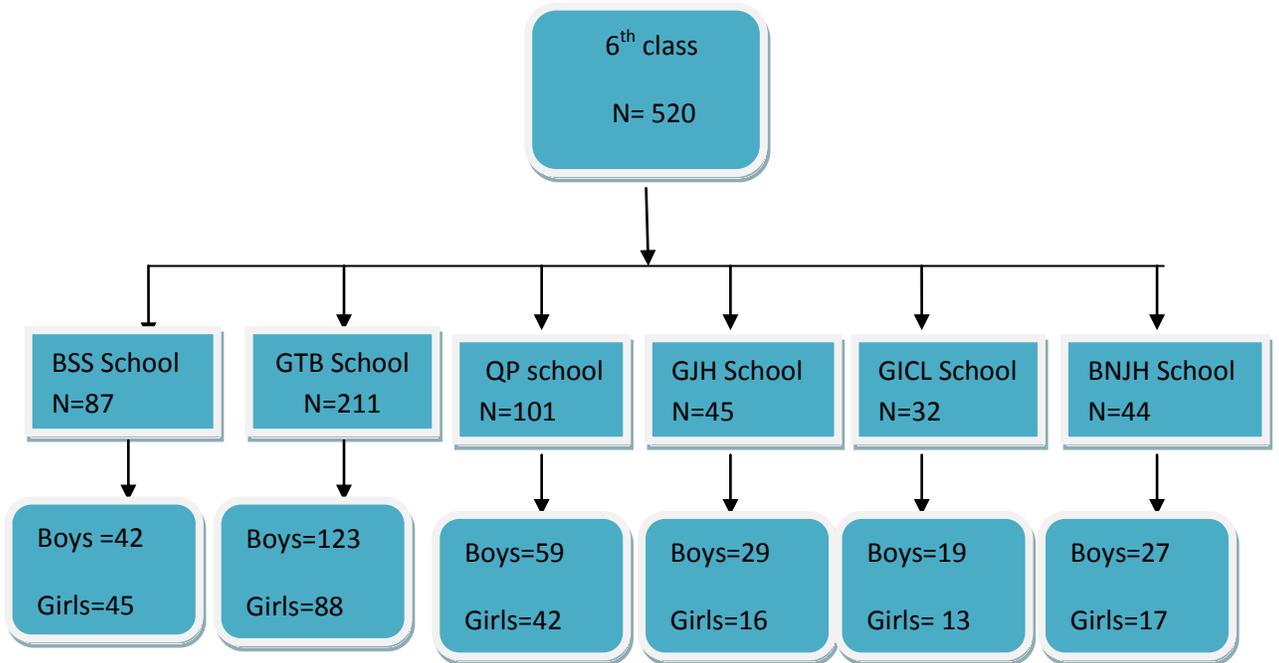
These classes were taken by the researcher because 6 class students were moving in upper primary where they have to study many new other subjects and 8 class students were moving to secondary classes where they have to choose final subjects for their studies and also they have to prepare for the competitive exams for future so it is the appropriate time where they can improve and work upon their study habits. The total sample was selected from the six different Government/ Private school and all the available students were selected from each class (6th and 8th).

3.5.2 Sample size and distribution

The total sample size undertaken for the study was 1116 students. The researcher has covered all the available students from the selected 3 government (322) and 3 private (794) schools. Government schools which were covered i.e. government inter college lamachaur (115), government junior high school kamalwaganj (77), bal nil yam junior high school (130) and private school which were covered i.e. Beersheba. Sr.sec school (201), guru teg bahadur school (398), queens public school (195) these are the school which were selected for the present study.

3.2 class wise distribution of samples

3.2.1 Distribution of 6th class

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                         ┌─────────────────┐
                         │    6th class    │
                         │                 │
                         │     N= 520      │
                         └─────────────────┘
                                  │
     ┌────────────┬────────────┬──┴──────┬────────────┬────────────┐
     ▼            ▼            ▼          ▼            ▼            ▼
┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│BSS School│ │GTB School│ │ QP school│ │GJH School│ │GICL School│ │BNJH School│
│  N=87    │ │  N=211   │ │  N=101   │ │  N=45    │ │  N=32    │ │  N=44    │
└──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
     │            │            │          │            │            │
     ▼            ▼            ▼          ▼            ▼            ▼
┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│ Boys =42 │ │ Boys=123 │ │ Boys=59  │ │ Boys=29  │ │ Boys=19  │ │ Boys=27  │
│          │ │          │ │          │ │          │ │          │ │          │
│ Girls=45 │ │ Girls=88 │ │ Girls=42 │ │ Girls=16 │ │ Girls= 13│ │ Girls=17 │
└──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
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3.2.2 Distribution of 8th class

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                         ┌─────────────────┐
                         │    8th class    │
                         │                 │
                         │     N=596       │
                         └─────────────────┘
                                  │
     ┌────────────┬────────────┬──┴──────┬────────────┬────────────┐
     ▼            ▼            ▼          ▼            ▼            ▼
┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│BSS School│ │GTB School│ │ QP school│ │GJH School│ │GICL School│ │BNJH School│
│  N=114   │ │  N=187   │ │  N=94    │ │  N=32    │ │  N=83    │ │  N=86    │
└──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
     │            │            │          │            │            │
     ▼            ▼            ▼          ▼            ▼            ▼
┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐ ┌──────────┐
│ Boys =56 │ │ Boys=98  │ │ Boys=44  │ │ Boys=14  │ │ Boys=47  │ │ Boys=57  │
│          │ │          │ │          │ │          │ │          │ │          │
│ Girls=58 │ │ Girls=89 │ │ Girls=50 │ │ Girls=18 │ │ Girls= 36│ │ Girls=29 │
└──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘ └──────────┘
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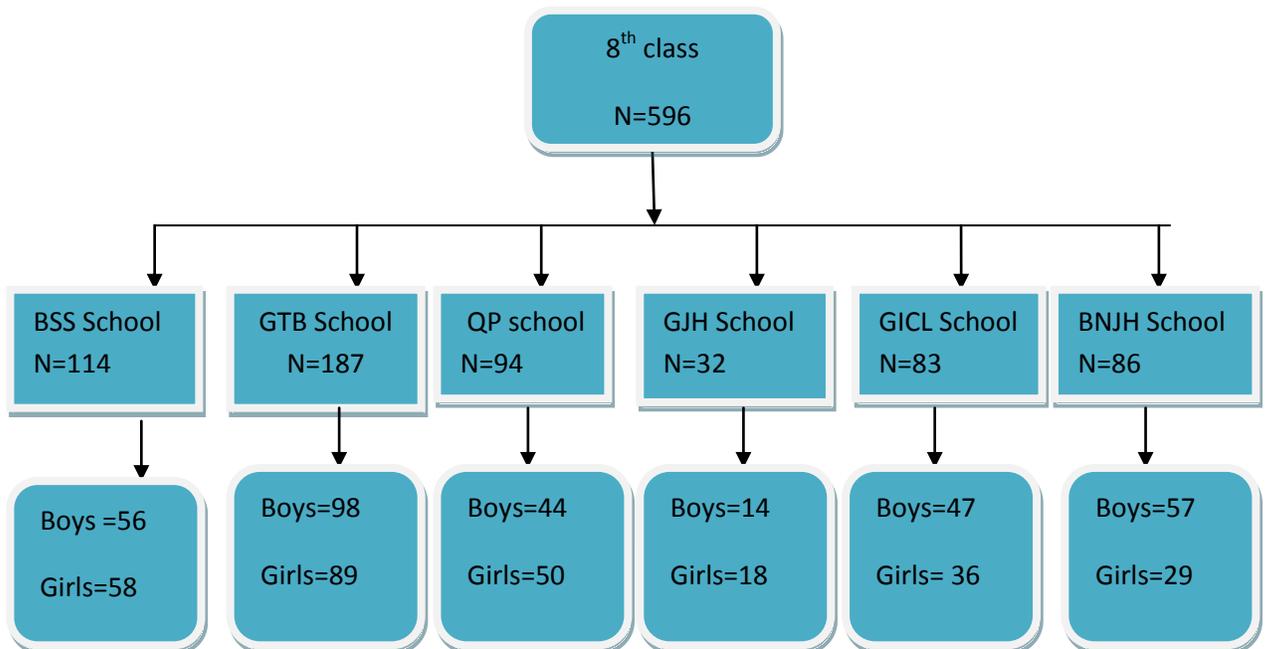
3.6 Process of data collection

1- The researcher took the permission from the principal of different six co-ed schools of government or private.
2- The important and necessary instructions were given to all the respondent before filling the Performa.
3- The three self-constructed questionnaire namely study habit inventory, factor affecting study habit and techniques used to studying different subjects these were distributed among the students belonging to VI and VIII class of the ten different co-ed schools.

3.7 Variables undertaken in the study

A quantity which can take different value is called variables. A detailed account of selected independent and dependent variables have been presented in tables 3.2

3.2 Variables and their measurements

Variables	Tool used
Independent variables	
Gender Class Ordinal position No of siblings Parental education Monthly income Type of family Type of schools	General information Performa

Dependent variables	
Study habits	
Factor affecting study habits	
Techniques used for studying different subjects	Self-constructed questionnaire on Study habit inventory .

3.7.1 Independent variables

Independent variable is the presumed cause of dependent variables or in other words, the variables expected to explain changes in dependent variables.

3.7.1.1 Gender: - it refers to whether the student is male or female.

3.7.1.2 Class: - class was operationalzed as the number of standards in which they studied at the time of data collection.

3.7.1.3 Ordinal position: - it refers to the birth position of the respondent among his/her sibling. It ranged from first born to third born and above

3.7.1.4 No of siblings: - it is a total no of brother and sister of the respondent in a family.

3.7.1.5 Parental education: - it refers to the no of years of formal education attained by the respondent parents

3.7.1.6 Type of schools:-it refers to two types of schools i.e. government and private schools

3.7.1.7 Type of family: - it denotes whether the family is nuclear or joint.

3.7.1.8 Monthly income: - it is a measure of the combined income of all members sharing a particular household or place of residence. It includes every form of income.

3.7.2 Dependent variables

When one variable depend upon or is a consequences of other variables is called as dependent variables.

3.7.2.1 Study habits: - it refers to the student ways of carrying out the task of studying by using various techniques and ways in the field of study to keep him afloat along with the wise use of his/her time in studying.

3.7.2.2 Factor affecting study habits:- it refers to the different factors like personal , family, school environment, peer group which affect study habits of different level achievers.

3.7.2.3 Techniques used for studying different subjects:-it refers to the different techniques used in reference to different subjects like mathematics, science, social studies, English language.

3.8 Pilot study

A pilot study is a small scale replica and a rehearsal of the main study. Pilot studies are concerned with executive and organizational problem related to whole study and respondents. The researcher undertook a pilot study to test the tool to be used for data collection.

3.8.1 for the development of tools

The researcher applied the pilot study on the 25 students of VI and 25 students of VIII standard of Haldwani city. The tool was prepared for the students to identity their study habits, factor affecting their study habits of different level achievers and different techniques used in reference to different subjects.

3.8.2 for improving final draft of the tools

Before giving the final shape to the tool, pilot study was done in which experts, psychologist, educationists and teacher were asked to read the statement thoroughly in order to find out any uncertainty in the statement and to comment about the size, structure, wording of the instrument. Qualitative evaluation was done which indicated the need for certain modification in the format, sentences construction and more appropriate use of words.

3.9 Tools used in the study

Self constructed questionnaire: study habit inventory and students study habits

3.9.1 Study habits inventory

This questionnaire was developed by the researcher and it has three parts:-

In first part to analysis study habits of students among VI and VIII grade. It has six dimensions that were time management, concentration, study techniques, parental involvement, teacher involvement and examination related study habits.

In second part to analysis the factor affecting study habits of students among VI and VIII grade, it has four dimensions that were personal, family, school environment, peer group.

In third part to analysis the practices used for studying different subjects. It was developed by reviewing books, researches, guideline related with the different subject appropriate techniques identify with the help of teachers, educationalist also taken for identify the same by analyzing thoroughly all above mention researches finally draft out most suitable techniques which are subjects specific should be used by the students for best outcomes in that subjects. it has four dimensions that were math, English, science and social studies subjects.

3.9.1.1 Scoring: - The first part comprised of 40 close ended statements, in second part 31 close ended statements and in third part 38 close ended statement. The tool included both positive and negative statement with the option at all time, most of the time, sometime, never. The positive question were given four marks for the option at all time, three marks for most of the time, two marks for some time and one marks for never. The reverse was done for the negative questions.

3.3 List of various study habits dimensions

Sr. No	Dimensions	Question no
1	Time management	1-5
2	Concentration	6-13

3	Study techniques	14-22
4	Exam preparation	23-28
5	Parental involvement	29-34
6	Teacher involvement	35-40

3.4 Time management level

Sr. No	Range	Level
1	16-20	Good
2	11-15	Average
3	5-10	Poor

3.5 Concentration level

Sr.No	Range	Level
1	25-32	Good
2	17-24	Average
3	8-16	Poor

3.6 Study techniques level

Sr. No	Range	Level
1	28-36	Good
2	19-27	Average
3	9-18	Poor

3.7 Exam preparation level

Sr. No	Range	Level
1	19-24	Good

2	13-18	Average
3	6-12	Poor

3.8 Parental involvement level

Sr. No	Range	Level
1	19-24	Good
2	13-18	Average
3	6-12	Poor

3.9 Teacher involvement level

Sr. No	Range	Level
1	19-24	Good
2	13-18	Average
3	6-12	Poor

3.10 Study habit level

Sr. No	Range	Level
1	137-160	Excellent
2	113-136	Good
3	89-112	Average
4	65-88	Poor
5	40-64	V. Poor

3.11 categories of different level achievers

Level of achievers	Scores
Below average	Below 50%

Average	50 to 75 %
Above average	Above 75%

These categories were decided after assessing the scores of their previous two years grades and marks.

3.12 List of various factors dimensions

Sr. No	dimensions	Question no
1	Personal factors effects	1-8
2	Family factors effects	9-15
3	School environment factors effects	16-23
4	Peer group factors effects	24-31

3.13 Personal factors effects

Sr. No	Range	Level of effects
1	25-32	Least
2	17-24	Moderate
3	8-16	High

3.14 Family factors effects

Sr. No	Range	Level of effects
1	22-28	Least
2	15-21	Moderate
3	7-14	High

3.15 School environment factors effects

Sr. No	Range	Level of effects
1	25-32	Least
2	17-24	Moderate
3	8-16	High

3.16 Peer group factors effects

Sr. No	Range	Level of effects
1	25-32	Least
2	17-24	Moderate
3	8-16	High

3.17 List of various dimensions

Sr. No	Dimensions	Question no
1	Math subjects	1-13
2	Science subjects	14-24
3	Social studies subjects	25-29
4	English subjects	30-38

3.18 math subject techniques

Sr. No	Range	Techniques
1	40-52	Highly appropriate techniques
2	27-39	Appropriate techniques
3	13-26	least appropriate techniques

3.19 science subject techniques

Sr. No	Range	Techniques
1	34-44	Highly appropriate techniques
2	23-33	Appropriate techniques
3	11-22	least appropriate techniques

3.20 social studies subject techniques

Sr. No	Range	Techniques
1	16-20	Highly appropriate techniques
2	11-15	Appropriate techniques
3	5-10	Least appropriate techniques

3.21 English subject techniques

Sr. No	Range	Techniques
1	28-36	Highly appropriate techniques
2	19-27	Appropriate techniques
3	9-18	Least appropriate techniques

3.9.2 Students study habits

This questionnaire was developed by the researcher and it has three parts. In first part to analysis study habits of students among VI and VIII grade. It has six questions. In

second part to analysis the factor affecting study habits of students among VI and VIII grade, it has one question and in third part to analysis the practices used for studying different subjects, it has four questions.

3.9.2.1 Scoring: - it was based on the qualitative analysis of the respondents view. Here the respondents are free and liberal in giving their perspective on the question asked. There are no criteria of right and wrong responses/ answers while assessing the questions.

3.10 statistical analyses

All statistical analysis is performed by using the SPSS 16.0 for window. Considering purpose of the study frequencies, percentage, mean, standard deviation, T-test, chi-square was used in data analysis. The statistical significance level was accepted as $**P \leq .01$ and $*P \leq .05$ in the study.