Chapter 3. RESEARCH METHODOLOGY

3.1 INTRODUCTION:
A research is a scientific and systematic process of collecting the information pertaining to a topic. It is process of gathering new information or adding to the prevailing information. Research is a journey of knowledge. A research is undertaken to answer various questions which arise in the mind of the researcher. The research is basically conducted to find out a truth which is hidden. However there could be various objectives to conduct the research, they could be broadly classified as – to gain familiarity with a phenomenon, to portray accurately the features of a particular individual, situation or a group, to decide the frequency with which something occurs or with which it is associated, to test a hypothesis of relationship between two variables. A research is undertaken to explore something new or to add new knowledge to the existing one. It is a very important in any research to have a proper framework to collect the data. The researcher has to clearly define the way the research would be conducted. The geographical limits and the sample design, the techniques that will be used to analyse the data etc. Research Metodology is a process of collecting the required data for the problem in hand. It applies the scientific techniques to collect the required information which would be useful for the society as a whole. Research methodology is both descriptive as well as statistical. Research methodology aims at amelioration.

Research Methodology is a process to solve the research problem in a very systematic way. It is a way to undertake the research in a logical way. It helps to know the various steps to be taken to undertake the research with a logic. The researcher has to be clear about the research methods and the research methodology. Research methodology has various dimensions and the research methods are part of the research methodology. Research methodology is a wider term than the research methods. Thus when we talk about the research methodology we also include the research methods with a logic behind them.
• **NEED OF A RESEARCH DESIGN:** Making a proper research design helps the researcher in conducting the procedure of research in a systematic way and it also helps in estimating the time required for the same. It further guides the researcher about the identification of the necessary tools to be prepared for the collection of the data and to accept or reject the hypotheses with which the research was started. It also gives an idea about the statistical techniques to be used to analyse the data. It helps in organizing the material in respect of the objectives of the study and helps the researcher to be on the right track in the procedure of the research.

The present research is social research as it is concerned with the people of the society. The research was conducted through the survey method.

**Survey Method:** The present study is a survey which is most often used method to assess thoughts, opinions and the feelings. The psychologists and the sociologists generally use the survey method to analyze the behaviour. A survey consists of a predetermined set of questions that is given to the sample for collecting the information. In educational research too the survey method is only popularly used. It is that method of investigation which attempts to describe and interpret what exists at present in the various forms such as the conditions, practices, processes, trends, effects, attitudes, beliefs etc. It helps to investigate the conditions or the relationships which exist.

The word survey indicates the gathering of the data regarding current conditions. The survey studies collect three types of information:

- What exists by studying and analyzing important aspects of present situation.
- What we want by clarifying goals and objectives possibly through a study of the conditions existing elsewhere.
- How to get there through discovering the possible means of achieving the goals on the basis of the experiences of others.

The characteristics of survey method include:

- It is essentially cross-sectional.
• It gathers data from a relatively larger group.

• It is concerned not with the characteristics of individuals but with generalized statistics of the whole population or the representative of the population.

• It deals with clearly defined problems and has definite objectives. It requires imaginative planning, a careful analysis and interpretation of the data and a logical and skilful reporting of the findings.

• It does not aspire to develop an organized body of scientific laws but provides information useful to the solutions to the local problems.

• Surveys greatly vary in complexity, some concerning only with the frequency count of events, while others seek to establish the relationships among the events.

• Surveys may be qualitative or quantitative.

• Descriptions which result from surveys may be verbal or can be expressed in mathematical symbols.

• Surveys may not notably forward looking.

• It focuses on the relationships.

• It is more realistic than the experiment as it studies the phenomenon in the natural setting.

The various types include the following:

**TYPES OF RESEARCH:**

• **EXPLORATORY RESEARCH:** In this type of research the researcher analyses the available data and finds out as many relationships as possible between the two variables without knowing their end applications. It is the initial research. There is no specific objective in conducting such a research except that the researcher only wants to establish relationship between the different variables.

• **DESCRIPTIVE RESEARCH:** This type of research is carried out with a specific objective, thus such research has certain specific conclusions. It describes the
characteristics of the respondents in relation to a particular product or practice or culture of importance.

- **EXPERIMENTAL RESEARCH**: It is a research that is conducted to study the effect of a set of factors on the response variable of a particular system. The research is conducted under controlled situations and analysed using ANOVA.

The present study is defined as “The Effect Of Organizational Climate On Job Satisfaction Of Teachers And Academic Achievement Of Students With Respect To Junior Colleges Of Greater Mumbai.”

### 3.2 METHODOLOGY OF STUDY:

The present study is a descriptive study as it is conducted with a specific objectives. It describes the characteristics of the respondents in relation to a particular context. It is conducted to test certain hypothesis.

Under this study the climate of the junior colleges is analysed and whether it has any impact on the teachers and the academic achievement of the students of standard XII or not. It describes the organizational climate as perceived by the teachers of the aided, unaided and minority junior colleges. It also describes the difference between the perception of the junior colleges by the male and female teachers. The study also describes the job satisfaction of the junior college teachers. It also describes the difference between the level of job satisfaction of the various junior colleges such as aided, unaided and minority junior colleges and also the difference between the male and the female teachers of the junior colleges.

### SCOPE OF THE STUDY

- To study the climate of the junior colleges of Greater Mumbai as perceived by the teachers.
- To study the climate of the aided, unaided and minority junior colleges of Greater Mumbai as perceived by the teachers.
• To study the climate of the arts, commerce and science junior colleges of Greater Mumbai.
• To study the job satisfaction of male and female teachers of the aided, unaided and minority junior colleges of all the three streams i.e. arts, commerce and science in Greater Mumbai.
• To study the academic achievement of the students of standard XII of aided, unaided and minority junior colleges in all the three streams i.e. arts, commerce and science in respect of Greater Mumbai.

3.3 VARIABLES OF THE STUDY:
Variables are the conditions or the characteristics which the researcher wants to manipulate, controls or observes. The independent variables are those conditions which the researcher manipulates in his or her attempt to see their relationship to the observed phenomenon whereas the dependent variables are those conditions which appear, disappear or change as the researcher introduces, removes or make changes in the independent variables.

In the present study the independent variable is the organizational climate of the junior colleges and the dependent variables are the job satisfaction of the teachers and the academic achievement of student of std XII. The researcher wants to see the impact of the organizational climate of the junior colleges as perceived by the teachers on their job satisfaction and the academic achievement of the students.

3.4 SAMPLING:
In a research all the items that come into the category of enquiry is called as universe or the population. It will be entie set of the observations included in the study. The size of the population can be finite or infinite. When the sample size is countable it is called finite and when it is not countable it is called infinite. Sampling means to learn about the population on the basis of the sample taken from it. In this technique only a part of the population is studied to draw a conclusion. The sample selected for collecting the
information has to be proper as the accuracy of the findings largely depends upon the sample that we select for the study.

The three elements of sampling includes:
- Selecting the sample,
- Collecting the information,
- Making an inference about the population.

**SELECTING THE SAMPLE:** It is the process to select the sample from the population under study. It is a difficult task for the researcher. The size of the sample should neither be very big nor very small otherwise it would be difficult to draw any proper conclusion. The scope of the study must be taken into consideration before deciding the size of the sample.

In the present study the sample is students of standard XII and teachers of 20 junior colleges of Greater Mumbai. These junior colleges are selected randomly. The junior colleges include the aided, unaided and minority junior colleges of all the three streams that is Arts, Commerce and Science.

**3.5 COLLECTION OF DATA**
Data collection is an important part of the research process. The data has to be collected from the reliable sources so that it can help to analyse the hypothesis and help to reach at the right conclusion. There data can be classified as primary data or the secondary data. Primary data refers to the data that is collected by the researcher through observation, interview, questionnaires, schedules etc. The secondary data can be collected from previous records, books, journals, case histories etc. In a survey the data can be collected through any one of the following ways:

**OBSERVATION:** Here the researcher himself observes and collect the required information without interviewing the respondents. He just observes whatever happens in the current position, it is not affected by the past attitude or the future attitude of the
researcher. However it is a costly method and only limited information can be obtained. The method is suitable only when the sample size is small.

**PERSONAL INTERVIEW**: A researcher can collect the data by interviewing the concerned respondents. For this he has to prepare a set of questions that he would ask from the respondents. This method of collecting data should be well structured and the outcome totally depends upon the ability of the researcher. It is also a time consuming method.

**TELEPHONE INTERVIEWS**: This method of collecting the data involves collecting information from the respondents through telephones. It is not a very popular method. However the method is useful in case of industrial survey in the developed areas. Questionnaires: Both the researcher and the respondents can come in contacts in this method. It is the most common method to collect the data where a set of questions is prepared by the researcher. It is then explained to the respondents so that they can answer as per the questions. The questionnaire must be prepared with utmost great care so that it can help to collect the relevant data.

**SCHEDULES**: The enumerators are appointed and the training is given to them. They go to the respondents with the schedule to collect the data. The schedules are filled up by the enumerators as per the replies given by the respondents. The data collected here largely depends upon the capability of the enumerators.

### 3.6 TOOL

Tool is a method to collect the required information in the research. The method to be followed to collect the data depends upon the nature of the investigation. There are different types of statistical methods which we use in research. The methods which are used to find the measures of central tendencies are mean, median and mode. The methods to find the measures of dispersion are variance, coefficient of variance, coefficient of skewness, quartile deviation etc., forecasting, factorial design, sampling methods, test of hypothesis, factor analysis, discriminant analysis, conjoint analysis etc.
The researcher referred to various related literature to measure the organizational climate and the job satisfaction of the employees. There are various tools available to measure the same but the researcher felt the need to construct her own tools to measure the organizational climate and the job satisfaction of the junior college teachers.

**TOOL NO.1 “ORGANIZATIONAL CLIMATE QUESTIONNAIRE”**

Construction of tool to measure the organizational climate of the junior colleges— the researcher framed around 106 questions to be asked from the teachers of the junior colleges to measure the climate of the junior colleges as perceived by them. At the beginning the researcher had established the face validity depending upon the conceptual definitions, operational definitions and the related studies in the concerned topic.

While preparing the tool the researcher focused on the various aspects of the organizational climate in respect of a junior college to measure the climate. These aspects included the importance given to the importance of the personal needs, the way the conflicts between the people are resolved, the way the work is performed, whether people give importance to the general interest or not.

People are given responsibility with authority or not, the kind of treatment people get whether it is fair or not, the kind of communication takes place whether it is through proper channel or not. The researcher also focused on the fact that whether people are aware of the vision, mission and the objectives of the college or not, the style of leadership that is followed by the principal, Human efforts are reduced or there is always duplication of work. The kind of working conditions prevail, the infrastructure, whether the teachers are confident about the abilities of their boss or not. The way the work is allotted to the teachers whether it is as per their ability or not, whether teachers are blamed for the bad performance of the students always, the kind of opportunities given to the employees to participate in the decision making process and whether the environment is supportive or not, the way teachers are rewarded or punished etc.
VALIDITY OF TOOL 1. “ORGANIZATIONAL CLIMATE QUESTIONNAIRE”

It is important to see that the tool is valid to measure what the researcher has to otherwise the information collected can not be analysed in the right context. Tool validity refers to the degree to which the tool measures what it intends to measure.

The validity of the tool to measure the organizational climate as perceived by the teachers of the junior colleges in Greater Mumbai was established through the following ways:

1. Face validity: The face validity was established by the researcher. The researcher constructed the items to measure the organizational climate and the job satisfaction of the teachers of the junior colleges. Care was taken to construct each item with simplicity and without any ambiguity. The items were constructed in such a way that the teachers can clearly understand them without any difficulty.

2. Content validity: Content validity means the degree to which a tool actually measures or is specifically related to the traits for which it was designed. It shows how adequately the tool samples the universal knowledge and skills that a researcher wants to master.
   - To see the content validity the tools were given to the tool was given to 10 experts to find out the content validity. (The names of the experts are given in the Appendix.) Along with the Organizational climate a letter covering the nature, objectives and the operational definitions of each component was given. They all were requested to mark ‘R’ or ‘IR’ in the right hand margin of the item so as to mark relevant or irrelevant. As per the suggestions given by the experts the tool was the again reconstructed the items in the tool 1 were brought to 50 discarding the irrelevant items.
   - The success of a method in probing or assessing what it sets out to probe or assess. If the method is valid then the information collected can be
considered as true for the sample under study. The validity can be assessed on the basis of face validity, content validity, predictive validity and construct validity. The validity is assessed should be specific to a particular time, sample or context.

Thus to collect the right information it is important to prepare a valid tool, thus the researcher after preparing the tools gave them to the experts such as principals of various educational institutions, senior teachers and professors and the Ph.D holders. The corrections were then made in both the tools as per the guidance and the suggestions given by the experts. The questionnaires were prepared keeping in mind the objectives of the study.

**RELIABILITY OF TOOL 1. ORGANIZATIONAL CLIMATE QUESTIONNAIRE:**

Tool reliability refers to the degree of consistency with which a tool measures the attributes that it is designed to measure. The reliability was tested through “Test-retest”. The tools were given to the teachers to answer showed consistency in their responses. Test reliability is a criterion which refers to the consistency of data stemming from the use of a specific research method. Any measure is reliable to the extent that repeated application of this is under the same conditions give the same result. This refers to one method of assessing reliability is the test-retest method where the research is replicated. A comparison between the two indicates the reliability or lack of it. There are practical difficulties in this approach as the respondents could be influenced by the first experience. However whatever method is used it should be considered carefully the features and the objectives of the research design to make it more reliable.

In order to see the reliability of the test the tool was given to the same teachers twice in an interval of a week. The technique used was test-retest. The test reliability was found after the technique test-retest was used.
Data collection bias was reduced as the researcher herself went to collect all the data. The uniformity was maintained in explaining the tools and the objectives of the study. All the respondents were made comfortable by ensuring privacy and confidentiality.

**SPLIT-HALF RELIABILITY  ORGANIZATIONAL CLIMATE**

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 1</td>
<td></td>
</tr>
<tr>
<td>Cronbach’s Alphas</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>.623</td>
</tr>
<tr>
<td>N of Items</td>
<td>25</td>
</tr>
<tr>
<td>Part 2</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>.732</td>
</tr>
<tr>
<td>N of Items</td>
<td>25</td>
</tr>
<tr>
<td>Total N of Items</td>
<td>50</td>
</tr>
<tr>
<td>Correlation Between Forms</td>
<td></td>
</tr>
<tr>
<td>Spearman-Brown Coefficient</td>
<td></td>
</tr>
<tr>
<td>Equal Length</td>
<td>.915</td>
</tr>
<tr>
<td>Unequal Length</td>
<td>.915</td>
</tr>
<tr>
<td>Guttman Split-Half Coefficient</td>
<td>.914</td>
</tr>
</tbody>
</table>

**TOOL NO.2 “ JOB SATISFACTION SCALE”**

It was for measuring the level of the job satisfaction of the teachers of the junior colleges. The researchers according to her own experience of working in a junior college for more than 15 years and by referring to the related literature constructed a tool to measure the job satisfaction of the teachers including 103 items which were given to 10 experts for checking the content validity and again as per their suggestions the tool was reconstructed containing 50 items discarding the irrelevant.

The various aspects on which the researcher focused on to measure the level of job satisfaction of the teachers in the junior colleges are – the pay package and the other
incentives provided to the teachers. The intention of the teachers to quit their jobs. The way their efforts are appreciated. The kind of support the teachers get from the colleagues and the management to undertake the activities. The kind of work the teachers are allotted, workload of the teachers, the kind of treatment given to the senior teachers. Also the researcher focused on the fact whether the teachers are given proper guidance before the work or not and whether the work load increases with the hike in the salary. The kind of steps taken by the teachers to improve the result and to help the weak students, whether they make proper use of the available resources. They have the feeling that the higher authorities have a belief in their abilities and hence they are given different tasks to perform. The teachers welfare is given due importance by the organization. The teachers are loyal towards the organization and the work given to them is as per the objectives of the organization. The researcher also wanted to know whether the teachers are given the clerical work or not and if the teachers are able to learn new things under the leadership of their principal. The teachers care for the fate of their college or not and so on.

VALIDITY OF TOOL 2 “JOB SATISFACTION SCALE: THE VALIDITY OF THE TOOL TO MEASURE THE

Level of job satisfaction of the teachers of the junior colleges in Greater Mumbai was established through the following ways:

1. Face validity: The first step again was to establish the face validity in order to measure the level of the job satisfaction of the teachers of the junior colleges. The researcher drafted the items to measure the job satisfaction of the teachers of the junior colleges. The researcher kept in mind the importance of simplicity while drafting all the items so that they can be self explanatory. The items were constructed in such a way that the teachers can clearly understand them without any difficulty.

2. Content validity: Content validity means the degree to which a tool actually measures or is specifically related to the traits for which it was designed. It shows
how adequately the tool samples the universal knowledge and skills that a researcher wants to master.

- To see the content validity the tool it was given to the same 10 experts as in the case of tool no.1 to find out the content validity. Along with the Job satisfaction scale tool a letter covering the nature, objectives and the operational definitions of each component was given. They all were requested to mark ‘R’ or ‘IR’ in the right hand margin of the item so as to mark relevant or irrelevant. As per the suggestions given by the experts the tool was again reconstructed the items in the tool 1 were brought to 50 discarding the irrelevant items.

**SPLIT-HALF RELIABILITY JOB SATISFACTION**

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
<th>Part 1</th>
<th>Part 2</th>
<th>Total N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha Value</td>
<td>.807</td>
<td>.742</td>
<td>50</td>
</tr>
<tr>
<td>N of Items</td>
<td>25&lt;sup&gt;a&lt;/sup&gt;</td>
<td>25&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Correlation Between Forms</td>
<td>.778</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spearman-Brown Coefficient Equal Length</td>
<td>.875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UnEqual Length</td>
<td>.875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guttman Split-Half Coefficient</td>
<td>.875</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The present study is a survey; the researcher collected the data through the questionnaire.
3.7 ADMINISTRATION OF TOOLS

TOOL 1. ORGANIZATIONAL CLIMATE QUESTIONNAIRE
For proper administration of the tool to measure the organizational climate of the junior colleges of the Greater Mumbai, The researcher went to various junior colleges to seek permission from the Principals and the concerned management authorities to collect the required data. The researcher explained them about the nature of the study, scope and its educational significance. The written permission from them was taken by the researcher to collect the information from the teachers. After getting the permission from the concerned authorities the researcher selected 20 junior colleges in the Greater Mumbai.

The researcher went to these colleges met the teachers personally and explained them about the research topic. The tool was explained to them. The nature, scope, educational significance of the study etc were briefed to them by the researcher. The researcher then handed over the tool and asked them to fill it within 2-3 days. The researcher collected the same from them on the given dates.

TOOL 2. JOB SATISFACTION SCALE:
This tool was also administrated same as the tool 1. Same teachers were asked to fill the tool. They were explained about the tool and the items in it so that they can provide the correct information. They were given 2-3 days time to fill the information. The researcher personally went to each college to collect the data from the teachers.

The study also includes the effect of the organizational climate on the academic achievement of the students of the junior colleges. Thus the marks scored by the students of HSC in their board exams were considered. The researcher requested the principals of the selected colleges from where the data from the teachers were collected.
to give photo copy of the HSC Board mark sheet of the students who appeared in 2014.

The questionnaires were prepared keeping in mind the objectives of the study. Two questionnaires were prepared by the researcher one on the Organizational climate to analyse how the teachers perceive the climate of the organization that is climate of the junior college where they work and the other questionnaire was to analyse their job satisfaction.

The first questionnaire was to analyse the organizational climate of the junior colleges as perceived by the teachers of those junior colleges. The junior colleges included all the aided, unaided and the minority junior colleges. The questions were based on the various dimensions of the organizational climate such as leadership style of the principal, kind of communication, culture of the organization, values followed etc. the questionnaire included altogether 50 items on 5 point scale as follows:

1. Strongly agree 5
2. Agree 4
3. Undecided 3
4. Disagree 2
5. Strongly disagree 1

The second questionnaire was to analyse the level of job satisfaction of the junior college teachers. The teachers of the aided, unaided and the minority junior colleges were given the questionnaire. The questions were based on the opportunities offered to the employees for their development, personnel policies, working conditions, perks etc. The questionnaire included 50 items on 5 point scale as above.

The tools were made on the basis of 5 scale point rating as follows:

- Strongly agree was rated as 5,
- Agree was rated as 4,
- Undecided 3
Disagree 2 and
Strongly disagree was rated as 1.

3.8 ETHICAL CONSIDERATIONS:
It is important in any research to maintain honesty and integrity. It can be done through self determination, anonymity, confidentiality and informed consent. Permission to collect the data was taken from the principals and the concerned management authorities. The consent of the respondents was also obtained to participate voluntarily. Information provided by them was not disclosed to anyone. Further no respondent was linked with his or her personal response. Self determination was maintained by the researcher throughout the research. The respondents were informed that they can voluntarily participate.

Another principle that is very important in any research is scientific honesty. Thus there was no manipulation of the design and the methods or the data collection. Manipulation of the data was impossible as the data was entered from the questionnaires into the SPSS computer software programme.

3.9 PROCEDURE FOLLOWED TO COLLECT THE DATA
The data for the present study had to be collected from the junior colleges of the Greater Mumbai selected on random basis. Thus the permission for collecting the data was needed. The researcher went to different junior colleges including aided, unaided and the minority junior colleges in mainly three streams i.e. arts, science and commerce and took permission from the concerned authorities to collect the data.

After obtaining the permission from the principals of the researcher met the teachers of the concerned junior colleges. The teachers were explained about the topic of investigation and how to fill the questionnaires. Each item in the tool was explained in order to enable the teachers to be clear about it so that they can give right responses. They were asked to give their views about how they perceive the climate of
the junior college where they work and the level of their job satisfaction. They were also made clear that the information given by them will be kept confidential and will be used only for the research purpose. The researcher collected the tools from them after a couple of days.

**Sample size:** As in any research the whole population cannot be studied therefore the representative of the population has to be selected. In the present study the data was collected from 20 different colleges of Greater Mumbai selected on random basis. These colleges were aided, unaided and minority colleges. All three streams arts, commerce and science were included. The aided colleges are those which are aided by the government the unaided junior colleges are the private colleges where no funds are provided by the government, they are managed by the private individuals and the minority colleges are the ones which are managed by any minority groups.

The data was collected from the following colleges:

1. **Ashish Junior College, Ishwar Nagar, Bhandup (W).**

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>00</td>
<td>04</td>
</tr>
</tbody>
</table>

Ashish junior college situated in near the railway station in Ishwar Nagar Bhandup (W) has a limited staff and strength. The college is an aided junior college. The data was collected from the teachers about the climate of the college as perceived by them and their job satisfaction.
2. Junior College, Kannamwar Nagar, Vikhroli (E).

2. Asmita college of Arts and Commerce, Vikhroli (E).

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>09</td>
<td>17</td>
<td>26</td>
</tr>
</tbody>
</table>

The Asmitha junior college is situated at kannamwar Vikhroli. The college has a huge strength and has commerce and arts section. It is attached to a degree college. The researcher collected the data from the teachers which included 9 male 17 female teachers.

3. Bright High School and Junior College, Bhandup (W).

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Bright high school and junior college is in Usha Nagar, Bhandup (W) which is attached to school, it has only commerce stream and the strength of the college is less. It is run by a South Indian Christian minority institution. The data was collected from 10 teachers consisting 4 male and 6 male teachers.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>14</td>
<td>08</td>
<td>22</td>
</tr>
</tbody>
</table>

4. **Eden High School and Junior college, Safed pool, Sakinaka.**

The data was collected from 22 teachers of Eden Junior college which is in Sakinaka, Kurla. It is a South Indian minority institution. The college offers science and commerce streams. The teachers include 14 male teachers and 8 female teachers of both the science and commerce stream.
5. Guru Nanak Junior College of Arts, Commerce and Science, GTB Nagar, Sion.

<table>
<thead>
<tr>
<th></th>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13</td>
<td>07</td>
<td>20</td>
</tr>
</tbody>
</table>

The Guru Nanak Junior college is situated in Guru Teg Bahadur Nagar, Sion. It is a big institution attached to degree college. It offers science as well as commerce in junior college. It is an aided college. The data from the above college was collected from 20 teachers.
6. Karthika High School and Junior college of Science and Commerce, Kurla (W)

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>12</td>
<td>25</td>
</tr>
</tbody>
</table>

Kartika High School and Junior College is situated at New Hall Road, Kurla (W), information was collected altogether from 25 teachers, 13 male and 12 female teachers. The college is run by the South Indian Minority Group registered as Bharat Education Society. The college provides the opportunity to the students with low percentage to enroll themselves not only in the commerce stream but in the science stream too.

7. Michael High School and Junior College, Kurla (W).

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>21</td>
<td>29</td>
</tr>
</tbody>
</table>

Michael High school and junior college is in Kurla (W) near Sheetal Cinema. It is attached to a school. The college also has a separate afternoon timing only for the girls students. The college offers science as well as commerce. Data was collected from 8 male teachers and 21 female teachers, the number of female teachers was more in this college.
8. **Prerana Junior College, Parerawadi, Kurla.**

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>02</td>
<td>07</td>
</tr>
</tbody>
</table>

Prerana junior college is a small college situated in a slum area in sakinaka Kurla with a limited staff and small number of students. It is an unaided junior college which offers only commerce. The college has only 7 teachers consisting 5 male and 2 female teachers.
9. **PVG’s Vidyabhavan Junior College of Science, Ghatkopar (E).**

<table>
<thead>
<tr>
<th></th>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>13</td>
<td>23</td>
</tr>
</tbody>
</table>

Vidyabhavan junior college is situated in Ghatkopar (E). It is an aided college and the college has only science stream. The data was collected from 23 teachers consisting 10 male and 13 female teachers.

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>28</td>
<td>40</td>
</tr>
</tbody>
</table>

The above college is located in Bhandup (E) and is a big college. The college is run by Uttar Bharatiya Sabha. It is an aided junior college attached to Degree college accredited with grade ‘A’ by the University of Mumbai. The college has science and commerce stream and also offers post graduate courses. The data was collected from 40 teachers including 12 male and 28 female teachers.
11. Ramlingam Educational Foundation’s English High School And Junior college, Govandi.

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>03</td>
<td>06</td>
<td>09</td>
</tr>
</tbody>
</table>

Ramlingam junior college is attached to school. It is an unaided college and has very few students. It has less number of teachers that is only 9 consisting 3 male and 6 female teachers.

12. Sandesh Vidyalaya and Junior College, Vikhroli (E).

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>17</td>
<td>23</td>
</tr>
</tbody>
</table>

Sandesh Vidyalaya and junior college which is located in Vikhroli (E) is aided attached to degree college. The college has arts, science and the commerce stream. Data was collected from 23 teachers consisting 6 male teachers and 17 female teachers.

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>16</td>
<td>22</td>
</tr>
</tbody>
</table>

Seth Ishwardas Bhatia Junior college is situated in Wadia estate, Kurla (W). The college is popularly known as Karachi college. It is an aided college. It has both commerce and science streams. The information was collected from total 22 teachers consisted of 6 male and 16 female teachers.

14. Shivaji Shikshan Sanstha Multipurpose technical high school and junior college Ghatkopar (E)
The above college that is Shivaji Shikshan Sanstha multipurpose high school and junior college is a big college located at 90 feet Road, Ghatkopar (E). The college has science and commerce streams and it also offers vocational courses. It is an aided junior college and has a degree section too. From this college the data was collected from 43 teachers consisting 15 male and 28 female teachers.

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>28</td>
<td>43</td>
</tr>
</tbody>
</table>

15. **S.N.G College of Arts, Commerce and Science, Chembur.**

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>13</td>
<td>25</td>
</tr>
</tbody>
</table>

Narayan Guru College is situated in Chembur has all three streams of arts, science and commerce. It is a huge college attached to Degree College. The data was collected from 25 teachers consisting 12 male and 13 female teachers.

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>

D.J Doshi Gurukul Junior college is a attached to school. It is situated at Tilak Road in Ghatkopar. It is a minority institution run by Mumbai Pradesh Arya Vidyasabha. It has a degree section too offering various graduate courses. It is completely a commerce college. The data was collected from 26 teachers i.e 12 male and 14 female teachers.

1. Shri V.L Napoo High School and Junior College of Commerce, Chinchpokli (E).
The Shri V L Napoo junior college is attached to a school. It offers only commerce. It is an aided junior college. It is situated in Chinchpokli. The strength of the college is very less. The data was collected from 5 teachers consisting 2 male and 3 female teachers.

19. **S.S.S Junior College, Ghatkopar (W)**

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>04</td>
<td>22</td>
</tr>
</tbody>
</table>

The Shivaji Shikshan Junior college is in Ghatkopar (W) which has 22 teachers, 18 male and 4 female teachers. The data was collected from the above said 22 teachers. It is a branch of the SSS Multipurpose Technical Junior College (E).

<table>
<thead>
<tr>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>03</td>
<td>07</td>
</tr>
</tbody>
</table>

Vidyadeep Junior college is a small college in Parksite, Vikhroli. It is an unaided junior college which has very few students. The data was collected from 7 teachers consisting 4 male teachers and 3 female teachers.
20. **Vidyaniketan Junior College, Pant Nagar, Ghatkopar (E).**

<table>
<thead>
<tr>
<th></th>
<th>Male Teachers</th>
<th>Female Teachers</th>
<th>Total teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11</td>
<td>26</td>
<td>37</td>
</tr>
</tbody>
</table>

Vidyaniketan junior college is in Pant Nagar Ghatkopar (E). It has a large number of students. It offers both science and commerce. It is an unaided junior college. It has 37 teachers consisting 11 male and 26 female teachers. The data was collected from 37 teachers.

<table>
<thead>
<tr>
<th>Category of college</th>
<th>Number of teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aided</td>
<td>230</td>
</tr>
<tr>
<td>Unaided</td>
<td>105</td>
</tr>
<tr>
<td>Minority</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>425</td>
</tr>
</tbody>
</table>
The data to analyse the organizational climate was collected from 425 teachers, 230 teachers from the aided, 105 from the unaided and 90 from the minority junior colleges of Greater Mumbai.

To see the academic achievement of the students the marks obtained by them in their HSC board exams were collected.

- The details of the data collected of the students is as follows:

<table>
<thead>
<tr>
<th>Category of the college</th>
<th>Number of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aided</td>
<td>2148</td>
</tr>
<tr>
<td>Unaided</td>
<td>3809</td>
</tr>
<tr>
<td>Minority</td>
<td>1902</td>
</tr>
<tr>
<td>Total</td>
<td>7859</td>
</tr>
</tbody>
</table>

- Category of the college

<table>
<thead>
<tr>
<th>Name of the college</th>
<th>Category Of the college</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ashish junior college</td>
<td>Aided</td>
</tr>
<tr>
<td>2. Asmitha Junior college</td>
<td>Aided</td>
</tr>
<tr>
<td>3. Bright Junior college</td>
<td>Unaided</td>
</tr>
<tr>
<td>4. DAV Junior college</td>
<td>Aided</td>
</tr>
<tr>
<td>5. Gurukul Junior College</td>
<td>Minority</td>
</tr>
<tr>
<td>6. Guru Nanak Junior college</td>
<td>Aided</td>
</tr>
<tr>
<td>7. Kartika Junior College</td>
<td>Minority</td>
</tr>
<tr>
<td>8. Michael Junior College</td>
<td>Minority</td>
</tr>
<tr>
<td>9. Narayan Guru junior College</td>
<td>Aided</td>
</tr>
<tr>
<td>10. Prerana Junior College</td>
<td>Unaided</td>
</tr>
</tbody>
</table>
The study was undertaken to analyse the effect of the organizational climate of the junior colleges on the job satisfaction of the teachers and the academic achievement of the students of standard XII. From the above colleges the data was collected from the teachers through the questionnaires. The data was collected to analyse how the teachers of the above colleges perceive the organizational climate of these junior colleges and to analyse the level of their job satisfaction.

Thus to analyse the performance of the students the consolidated mark sheets of board exams conducted in the March 2014 were collected from all the above mentioned colleges.

**The data for the present study was collected from:**

<table>
<thead>
<tr>
<th>Collection of Data</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior colleges of Greater Mumbai</td>
<td>20</td>
</tr>
<tr>
<td>Teachers of the junior colleges of Greater Mumbai</td>
<td>425</td>
</tr>
<tr>
<td>Students marks’ in their std XII board exams</td>
<td>7859</td>
</tr>
</tbody>
</table>

To analyse the academic performance of the students of std XII the consolidated board exam mark sheets held in March 2014 were collected.
3.10 TESTS USED: THE FOLLOWING TESTS WERE CONDUCTED TO ANALYSE THE DATA:

**t-test**: t-test helps to know whether the means of two groups are statistically different from each other. It is appropriate only when we want to compare the means of two groups. The formula of t-test is a ratio. The top part of the ratio is just the difference between the mean or the averages. The t value is positive if the first mean is larger than the second and negative if it is smaller. Once the t-value is computed, table of significance is to be considered to test whether the ratio is large enough to say the difference between the groups is not likely to have been a chance finding. To see the significance a risk level called as alpha level is set. In a social research the rule is to set the alpha level at .05. This indicates that 5 times out of hundred we will find a statistically significant difference between the means even if there was none i.e by chance.

We also need to determine the degrees of freedom (df) for the test. In the t-test the degrees of freedom is the sum of the persons in both the groups minus 2. The t-test, one way Analysis of Variance (ANOVA) and a form of regression analysis are mathematically equivalent.

**r test**: Regression analysis is done to find out the relationship between two variables. It includes many techniques for modelling and analysing various variables when the focus is on the relationship between a dependent and one more independent variable. Regression analysis helps to understand how the typical value of the dependent variable changes when any one of the independent variables is varied while the independent variables are held fixed. Regression is an understanding used for prediction and forecasting. It helps to understand which among the independent variables are related to the dependent variable and to explore the forms of these relationships.

3.11 DATA COLLECTION AND ANALYSIS:
The collected data would not give any result on its own. Thus a proper methodology is required to convert the data into important information. Data collected itself will not speak or interpret anything. It's up to the researcher how the data has to be put into use to get the desired information. Thus analysis of data is a very important step in the research. The analysis of data requires certain steps such as establishing the categories, coding, tabulation and then drawing statistical inferences. The wide data collected should be condensed into manageable groups and tables for further analysis. Thus the researcher has to classify the raw data into some purposeful and usable categories. Coding is done at this stage, then to improve the quality of the data editing is done.

The data was collected from the aided, unaided and minority junior colleges. The information collected was on the organizational climate as perceived by the teachers, their level of job satisfaction and the mark sheets were collected to see the performance of the students in their HSC exams.

The score of all the teachers on organizational climate as perceived by the teachers and job satisfaction score was calculated. The strongly agree items were given 5 marks, agree items were given 4 marks, undecided items were given 3 marks, disagree items were given 2 and the strongly disagree items were given 1 mark. The researcher calculated the score for each tool and each respondent was given the total score.

The data was then put into various categories such as:

1. Organizational climate score as perceived by all the teachers.
2. Organizational climate score as perceived by the teachers of aided junior colleges.
3. Organizational climate score as perceived by the teachers of the unaided junior colleges.
4. Organizational climate score as perceived by the teachers of the minority junior colleges.
5. Organizational climate score as perceived by the male teachers of junior colleges.
6. Organizational climate score as perceived by the female teachers of junior colleges.
7. Organizational climate score as perceived by the male and female teachers of aided junior colleges.
8. Organizational climate score as perceived by the male and female teachers of unaided junior colleges.
9. Organizational climate score as perceived by the male and female teachers of minority junior colleges.
10. Job satisfaction score of all the teachers of the junior colleges.
11. Job satisfaction score of all the teachers of the aided junior colleges.
12. Job satisfaction score of all the teachers of the unaided junior colleges.
13. Job satisfaction score of all the teachers of the minority junior colleges.
14. Job satisfaction score of all the male teachers of the junior colleges.
15. Job satisfaction score of all the female teachers of the junior colleges.
16. Job satisfaction score of all the male and female teachers of the aided junior colleges.
17. Job satisfaction score of all the male and female teachers of the unaided junior colleges.
18. Job satisfaction score of all the male and female teachers of the minority junior colleges.
19. Marks scored by all the students of junior colleges in their HSC exams.
20. Marks scored by all the students of aided junior colleges in their HSC exams.
21. Marks scored by all the students of unaided junior colleges in their HSC exams.
22. Marks scored by all the students of minority junior colleges in their HSC exams.

The various statistical formulae were used to calculate the percentages, coefficients were calculated. In the process of analysis the relationships and the differences were analysed to test the hypothesis. The mean, mode and median of the data collected was calculated.
Mean values were calculated of the organizational climate as perceived by the teachers of the junior colleges and also of the job satisfaction of the teachers. To test the hypothesis the t – test and r- test were conducted.

t – test was done to see any significant relationship between the following:
1. The organizational climate as perceived by the teachers and job satisfaction of the junior college teachers.
2. The organizational climate and the job satisfaction of the aided junior colleges.
3. The organizational climate and the job satisfaction of the unaided junior colleges.
4. The organizational climate and the job satisfaction of the minority junior colleges.
5. The organizational climate and the academic achievement of the students of the junior colleges.
6. The job satisfaction of teachers and the academic achievement of the tests.
7. The organizational climate as perceived by the teachers of the aided and unaided junior colleges.
8. The job satisfaction of the aided and unaided junior colleges.
9. The academic achievement of the students of the aided and unaided junior colleges.

r–test was done to see the difference between the following:
1. The organizational climate as perceived by the male and female teachers of the junior colleges.
2. The organizational climate as perceived by the male and female teachers of the aided junior colleges.
3. The organizational climate as perceived by the male and female teachers of the unaided junior colleges.
4. The organizational climate as perceived by the male and female teachers of the minority junior colleges.
5. The job satisfaction of male and female teachers of the junior colleges.
6. The job satisfaction of male and female teachers of the aided junior colleges.
7. The job satisfaction of the male and female teachers of the unaided junior colleges.

8. The job satisfaction of male and female teachers of the minority junior colleges

After the data analysis the various graphs were made on the basis of the calculated mean percentage as follows:

1. Graph showing the total organizational climate score as perceived by the teachers of the aided, unaided and minority junior colleges.

2. Graph showing the organizational climate score as perceived by the teachers of aided and unaided junior colleges.

3. Graph showing the organizational climate score as perceived by the teachers of aided and minority junior colleges.

4. Graph showing the organizational climate score as perceived by the teachers of unaided and minority junior colleges.

5. Graph showing the organizational climate score as perceived by the male and female teachers of aided junior colleges.

6. Graph showing the organizational climate score as perceived by the male and female teachers of unaided junior colleges.

7. Graph showing the organizational climate score as perceived by the male and female teachers of minority junior colleges.

8. Graph showing the organizational climate score as perceived by the male teachers of the aided, unaided and minority junior colleges.

9. Graph showing the organizational climate score as perceived by the female teachers of the aided, unaided and minority junior colleges.

10. Graph showing the organizational climate score as perceived by the male and female teachers of the junior colleges.

11. Graph showing the total job satisfaction score of the teachers of the aided, unaided and minority junior colleges.

12. Graph showing the job satisfaction score of the teachers of aided and unaided junior colleges.
13. Graph showing the job satisfaction score of the teachers of aided and minority junior colleges.
14. Graph showing the job satisfaction score of the teachers of unaided and minority junior colleges.
15. Graph showing the job satisfaction score of the male and female teachers of aided junior colleges.
16. Graph showing the job satisfaction score of the male and female teachers of unaided junior colleges.
17. Graph showing the job satisfaction score of the male and female teachers of minority junior colleges.
18. Graph showing the job satisfaction score of the male teachers of the aided, unaided and minority junior colleges.
19. Graph showing the job satisfaction score of the female teachers of the aided, unaided and minority junior colleges.
20. Graph showing the job satisfaction score of the male and female teachers of the junior colleges.
21. Graph showing the marks scored by the students of the aided, unaided and minority junior colleges.
22. Graph showing the marks scored by the students of the aided and unaided junior colleges.
23. Graph showing the marks scored by the students of the aided and minority junior colleges
24. Graph showing the marks scored by the students of the unaided and minority junior colleges.
25. Graph showing the organizational climate score as perceived by the teachers and the marks scored by the students of the aided, unaided and minority junior colleges.
26. Graph showing the organizational climate score as perceived by the teachers and the marks scored by the students of the aided, unaided and junior colleges.
27. Graph showing the organizational climate score as perceived by the teachers and the marks scored by the students of the aided and minority junior colleges.
28. Graph showing the organizational climate score as perceived by the teachers and the marks scored by the students of the unaided and minority junior colleges.

29. Graph showing the job satisfaction score of the teachers and the marks scored by the students of the aided, unaided and minority junior colleges.

30. Graph showing the job satisfaction score of the teachers and the marks scored by the students of the aided and unaided junior colleges.

31. Graph showing the job satisfaction score of the teachers and the marks scored by the students of the aided and minority junior colleges.

32. Graph showing the job satisfaction score of the teachers and the marks scored by the students of the unaided and minority junior colleges.

33. Graph showing the organizational climate score as perceived by the teachers, job satisfaction and the marks scored by the students of the junior colleges.

34. Graph showing the organizational climate score as perceived by the teachers, job satisfaction and the marks scored by the students of the aided and unaided junior colleges.

35. Graph showing the organizational climate score as perceived by the teachers, job satisfaction and the marks scored by the students of the aided and minority junior colleges.

36. Graph showing the organizational climate score as perceived by the teachers, job satisfaction and the marks scored by the students of the unaided and minority junior colleges.
Research Methodology Chart
Organizational climate

- Aided
- Unaided
- Minority

Job satisfaction

- Male teachers
- Female teachers

Academic achievement

- HSC students

Data collection through randomly selected junior colleges in Greater Mumbai

Areas from where data was collected – Chinchpokli, Chembur, Ghatkopar, Vikhroli, Bhandup, Kurla, Slum, Govandi.

Description of analysis of data through central measures of tendencies, statistical techniques used: t-test, r-test.
CONCLUSION:
The research was conducted within Greater Mumbai. The above colleges were selected randomly. The areas of the study were Ghatkopar, Vikhroli, Bhandup, Kurla, Sion, Govandi, Chinchpokli, Chembur. The information on organizational climate as perceived by the teachers and the level of their job satisfaction was collected from the teachers of the above 20 colleges through two tools namely Organizational climate questionnaire and the Job satisfaction scale respectively.

The data about the academic achievement of the students of std XII was also collected from the same colleges. The photo copy of the consolidated mark sheets of the board exam conducted in February-March 2014 were collected. The study was on the organizational climate as perceived by the teachers and their job satisfaction. The collected data was organized, processed and analysed. The result of the data collected is discussed in the following