3.1 Introduction:

Research process consists of series of actions or step necessary to effectively carry out research work and desired sequencing of various steps as like, formulation of research problem, definition of the research problem, review of the related literature, preparation of research design, formulation of hypothesis, selection of sampling methods, selection of the data collection tool, coding and processing of research data, interpretation and finally presentation of research result and conclusion. The research problem have been formulated clear and the researcher will be required to prepare a research design, i.e. he will have to state the conceptual structure within which research would be conducted by him. The function of research design is to provide for the collection of relevant evidence with minimum expenditure of efforts, time and money will be saves. A well designed study is base on assumption and working hypothesis formulated before the plan is executed. A research design consists of several prepositions which are subjected to test and examination.

A research design is a plan of present research. The study of research methodology gives the researcher necessary for arrangement of data and research materials, use of statics in research, arrangement of questionnaires, receiving evidence, strong it out and interpreting it. In every research work set of tools is needed so, first of all a researcher has make a choice of the tools for the data collection. This selection of tools for data collection is not arbitrary, but is based on nature and types of study to be undertaken. Once the choice of tools is finalized the second important job of the researcher is to conscript the tools of the study.

Survey method is continuously used in social sciences so majority social science researchers are used survey method for their research. This method is frequently mode for observational study in social sciences. This types of methods is commonly used in social science for the collection of data. In survey method respondents may be selected accordingly to the scale of study, smaller in number or very large number also. If it appears that universe is very large and it would not be feasible to cover whole of the universe then sampling method is used for our research. A
sample is a small part of the whole universe. Under the sampling method it is not necessary to go for the whole universe, only representative sample can be drawn and conclusions are drawn.

A definite method is to be used for the collection of data from users with the help of survey method. In the modern era various data collections methods used in Library and Information science as like citation analysis method, questionnaire and interview scheduled method are popular in library and information science so majority library and information science researcher are used survey, questionnaire and interview method for data collection.

3.2. **Meaning of Research** - Research is an analytical activity and as such the term should be used in technical sense. According to the Clifford Woody “Research is comprises defining problems, formulating hypothesis, suggested problems, organization and evaluation of collected data, making deductions and reaching conclusion and at last carefully testing the result to determine if they fit to the data and the formulating hypothesis.” According to D. Slesinger and M. Stephenson in the encyclopedia of social science “The manipulation of things, concepts, symbols for the purpose of generalizing to extend, correct or verifying knowledge, whether that knowledge aids in construction of theory or in the practice of an art.” Research is thus, an original contribution to the existing stock of knowledge making for its advancement. It is a pursuit of truth with the help of study, observation, comparison and experiment. In short the search for knowledge through objective and systematic method of finding solution to a problem is research. The systematic approach concerning generalization and the creation development of theory is also research. AS such the term research refers to the systemic methods consisting of enunciating the problem, development a hypothesis, collection of data, analyzing data and reaching certain conclusion either in the form of solutions of problems towards the concerned problem or in certain generalization for some theoretical development.

3.3 **Objectives of the Research** - The purpose of research is to discover answers to questions through the application of scientific procedures. The main aim of research is to find out the truth which is hidden and which has not been discovered as yet. Though each research study has its own specific purpose we may think of research objectives. With the help of objectives to gain familiarity with a phenomenon to
achieve new insights into it (studies with this objects in view are termed as exploratory or formulator research study), To portray accurately characteristics of a particular individual, situation or a group (Study with this objects in view are known as descriptive research studies), To determine the frequency with which something occurs or with which it is associated with something else (Studies with this objects in view are known as diagnostic research studies), to test a hypothesis a causal relationship between variables (such studies are known as hypothesis-testing research studies).

3.4 Sampling Method
All the items in any field of inquiry a ‘Universe’ a complete enumeration of all items in the ‘population’ is known as a census inquiry. It can be presumed that in such an inquire, when all items are covered, no elements of chance is left and highest accuracy is obtained. But in practices this may not be true….. Even the slightest elements of brains in such an inquiry will get larger and larger as the number of observations increase. In the research process when universe is very big then must be selected the some units. The researcher must decide the way of selecting a sample or what is popularly known as the sampling design. Sample design is a definite plan determined before any data are actually collected for obtaining a sample from a given population. Thus the plan to select 12 of citys 200 drugstores in a certain way constitutes a sample design. Probability and non-probability is the main sampling methods. In the probability sampling method each elements has a known probability of being included in the sample but the non-probability sampling method do not allow the researcher to determine this probability. In the research probability sampling methods includes as like simple random sampling method, systematic random sampling, stratified sampling, cluster sampling methods where as non-probability samples are those based on convenience sampling, judgment and quota sampling methods.

In the research various sampling methods are used in research such as random sampling method, systematic sampling, stratified method, Quota method, cluster sampling sequential method and purposive sampling method. In the present work random sampling and purposive sampling method has used for selection of respondents. A total number of 270 questionnaires distributed to three districts senior colleges affiliated to North Maharashtra University Jalgaon and total 270
questionnaires were received from difference science colleges teachers. The total response has been depicted in the following tables:

1. **District wise distribution of questionnaires to science teachers**

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>District</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Jalgaon</td>
<td>120</td>
</tr>
<tr>
<td>2.</td>
<td>Dhule</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Nandurbar</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>270</td>
</tr>
</tbody>
</table>

In any educational system information role is very vital for acquiring knowledge for students, teachers and researchers. In the modern technological era information is available in different formats as like text, audio information, video information and multimedia. Publish information in different formats by the professional publishers, institutions, organizations and individuals for the researchers, students, professionals and other academic purpose. There has been educational sector has change due to the development of information and communication technology so there are emergence of various electronic resources as like electronic books, electronic journals, e-databases, e-images, audio, both online and offline sources of information, electronic videos, open courseware, video information and other
multimedia sources. With the help of information and communication technology users can access very huge information via internet and other networking websites for complete their educational and other professional purpose. In the modern period users can access very huge information for teaching, learning and research process via digital libraries, institutional repository and consortiums. Majority information sources provide very update and current information about the various subject for their research and educational purpose so majority science teachers access electronic resources for complete their purpose.

3.5 Sources of data collection-
In dealing with any real life problem it is often found that data at hand are inadequate, and hence, it becomes necessary to collect data that are appropriate. There are several ways of collecting the appropriate data which differ considerably in context of money cost, time and other resources at the disposal of the researcher. Primary data can be collected either through experiment or using survey method. If the researcher conducts and experiment, he observe some statically measurement or the data with the help of which he examine the truth contained in his hypothesis.

To study the use of internet and electronic resources by science teachers affiliated to North Maharashtra University Jalgaon, the following resources selected for the data collection. Both primary and secondary sources of data collection used for collection of data from various colleges’ science teacher’s affiliated North Maharashtra University Jalgaon. Primary data collected with the help of filled questionnaires form science teachers and arranged interview method with the some science teachers those having more than 20 years teaching experience at senior colleges. Beside this, for observation and investigation method used for collection of data for this research and arranged discussion method with assistant professor, associate professor, professor from various colleges for the data collection.

The secondary data collected form electronic journals, news papers, website, encyclopedia, dictionary, and books and published, unpublished research result.

Research instruments-
3.5.1. Questionnaire- is a consisting of a series of question dealing with some internet based, search engine, using electronic resources and which problems face by users while accessing internet and getting electronic resources. Sent or given to an individual or group of individuals with the object of obtaining data with regard to
some problems under investigation. Questionnaire is a popular means of collecting all kind of data in social science research. It is widely used in library and information science research for obtaining information from users of library, librarian and library professional.

In the present research construct questionnaire for data collection from various science teachers on various aspects as like knowledge of computer application, internet based question, search engine, website, online resources, personal information of users, using capacity, advantages of electronic resources, disadvantages of e-resources and which problems faced by users while accessing internet and electronic resources.

3.5.2. Interview scheduled-

Interview schedule is a written list of question, both open and close ended prepared for use a researcher for collection of data from various science teachers. In the present study use of interview schedule for data collection.

3.5.3. Observation-

The observation method is used in majority human behavioral science. In this way we can observe different things which are around us, but this is general observation and this types of observation is not scientific observation. Observation method can make scientific tool if this method when researcher used for collecting data to his completed research purpose, observation is systematically planed, recorded, subjected to checks, controls, validity and reliability. With the help of observation method researcher can collect data or information by his own or direct observation. In this method there is not necessary to asking question to the users. He can collected data without asking questions, without communication with respondent. This methods is very useful for research but when if observation is done accurately. Observation is the process in which one or more person observes what occurring in some real life situation is. Observation as a research technique must always be experts and directed by a specific purpose. It is nighters neither haphazard nor unplanned. The planning for observation includes definition of specific activities or units of behavior to be observed. In the present research observation tools is used for collecting information from science teachers. With the help of these tool researcher understand users behavior as like, nature of science teachers, role of internet in the research, users opinion about internet and electronic resources, which problems
faced by science teachers while using internet, verify knowledge of computer and what are the advantages and disadvantages of internet and electronic resources.

3.6 Problems Encountered-
In the present study data collected from science teachers of various college’s affiliated to North Maharashtra University, Jalgaon with the help of survey method because of this method is very useful in social science research. The science teachers in various colleges being busy in their teaching, learning, practical, research purpose and other academic work showed disinclination fill up the questionnaires, but due to repeated visit to science teachers of various colleges and receive appreciable response from science teachers. First of all questionnaires were distributed to selected science teachers and after distributed questionnaires two or four visited to science teachers for the received questionnaires. Those who has newly appointed science teachers they keen interest in filling up the questionnaires as compared to experienced science teachers. Newly appointed science teachers are very update about internet and electronic resources.

3.7. Statically methods used for the study- Statistical methods are extensively used in library and information science research. They provide indispensable tools for collecting, organizing, analyzing and interpreting data expressed in numerical terms. By synthesizing the data these methods can facilitate the derivation of conclusion and formulation of generalization. In the present study, the researcher under the guidance and advice from the research supervisor developed the questionnaire on the topic of “Use of internet and e-resources among science teachers of senior college affiliated to North Maharashtra University, Jalgaon Region: A critical study” In present research researcher meet and consulted them various research methodology experts for the using statically methods for the study as like, Dr.D.K.Veer, Dr.A.N.Chikate, Dr.Ashok Gingine, Dr. Baviskar and other research methodology experts.

The data collected using questionnaires and interview scheduled for the present study and was analyzed data with the help of SPSS (Statistical Package for Social Science) software. Tabulation of data, tables of data, graph of data, frequencies, and percentages required for analysis and interpretations of present data.
3.8 Study Variables-
A) Designation of science teachers
B) Most used e-resources
C) Most preferred e-mail services
D) Time access of internet for teaching and research process
E) Time spend for electronic resources for research and other purpose
F) Age group wise using internet
G) Users opinion about internet based information
H) Satisfaction levels on users about electronic resources
I) Problems faced by science teachers while using internet and electronic resources
J) Users opinion about N-List consortium

3.9. SPSS (Statistical Package for Social Sciences)

The use of SPSS packages in social science research for analysis logical batched and non-batched statically data so its widely used in library and information science research. These software include various program as like, frequency distribution, univariate and multivariate analysis, regression, correlation of data analysis, factor analysis of data, long liner model etc.

An SSPS package has generate the summary of statically data such as generate measurement of central tendencies (Mean, Median, Mode), standard deviation, variance, range of data, skewness, minimum and maximum value. SPSS windows very 6 is a well integrated program that adheres to many commands like file, edit, new, open, save, exit are used in research.

3.10 Data Analysis-

With the help of various data analysis technique researcher can analysis qualitative and quantitative data collected from science teachers. Data analysis provide a brief description of qualitative and quantitative data and more detail discussion on the subject. The use of data analysis technique after collection of data because of data is a raw materials after the analysis data become a information so data analysis is a very essential parts of any research.
The first step in analyzing qualitative research involves organizing the data collected from users. In qualitative research, researchers collected data from various data collection methods such as interviews, observations, surveys, case studies, and documentary methods. The method of organizing data will differ depending upon the research strategy and data collection method used for research. Interview data may be organized according to the individual respondents. Research results depend on which data collection method is used for present research, so majority researchers used standardized interview formats for data collection. Observation method is used in research for data collection because it is a very reliable data collection technique so majority researchers used this technique in various disciplines such as social sciences, languages, chemical sciences, physical sciences, mathematical sciences, and life sciences. The researcher describes the various pertinent aspects of the study including the setting, both temporally and physically.

3.11. Citation style-
  
  Citation is a reference to published and unpublished sources they use for the present study. In this study, references are inserted based on the American Psychological Association (APA) style.
3.12 References


