


Subject: LAW

Production of Courseware

 - Content for Post Graduate Courses



Paper : RESEARCH METHODOLOGY

Module : TOOLS AND TECHNIQUES OF DATA COLLECTION





Role	Name	Affiliation
Principal Investigator	Prof. (Dr.) Ranbir Singh	Vice Chancellor, National Law University, Delhi
Co-Principal Investigator	Prof. (Dr.) G.S. Bajpai	Registrar, National Law University Delhi
Paper Coordinator	Prof. (Dr.) G.S. Bajpai	Registrar, National Law University Delhi
Content Writer/Author	Dr Himanshu Pandey	National Law University, Assam
Content Reviewer	Prof. (Dr.) G.S. Bajpai	Registrar, National Law University Delhi

DESCRIPTION OF MODULE

Items	Description of Module
Subject Name	Law
Paper Name	Research Methodology
Module Name/Title	Tools and Techniques of Data Collection
Module Id	XII

1. Introduction:

In every research work, it is essential to collect factual material or data unknown or untapped so far. It can be obtained from many sources, direct or indirect. It is necessary to adopt a systematic procedure to collect essential data so that the appropriate data relevant in research to be collected in quantity and quality and it should also be reliable and valid....For each and every type of research we need certain instruments to gather new facts or to explore new fields. The instruments thus employed as means for collecting data are called tools.¹

Techniques and Tools are the ways and means to conduct research and it could only be justified through the use of appropriate methods and techniques meant for it, and Thereby collected evidence is called data and the tools used for this are called data collecting devices or tools, which is a common phenomenon in the behavioral researches. These tools help to realize, analyze and interpretation of data related to research. A researcher needs many data gathering tools and devices which may vary in their complexity, design, administration and interpretation.²

The selection of suitable instruments or tools is of vital importance for successful research. Different tools are suitable for collecting various kinds of information for various purposes. The researcher may use one or more tools in combination for his purpose. Researchers should therefore familiarize themselves with the verities of tools with their nature, merits and limitations. They should also know how to construct and use them effectively. The systematic way and procedure by which a complex or scientific task is accomplished is known as the technique. Techniques are

¹ www.mu.ac.in/myweb_test/Research%20Methodology.../Chapter-9.pdf

² J.A. Khan, *Research Methodology* (1st, APH Publishing Corporation, New Delhi 2008) 97



the practical method, skill or art applied to a particulate task. So, as a researcher, one should aware of both the tools and techniques of research.³

2. Learning outcome – Intended learning outcome of this module is to make the students -

- Understanding of basic techniques and tools used for data collation in legal research.
- Developing skills of selecting appropriate techniques and their tools with best judgment in the light of objective and purpose of research.
- To develop skills of constructing and designing tools.
- To aware the students regarding benefits and limitations of various tools and techniques.

3. Data Collection in Legal Research –

Data collection is the middle compartment between formulation of research problem and results of research. Supplying data for research purpose works to fuel for stimulating research process and in majority cases reward or frustration in research credited for quality of data, method, tools and techniques used for data collection. Researcher should be equally skilled in all process of research applied at varies stages.

Data collection methods, tools and techniques should be highly standardized so that the data relevant to undertaken research can be easily visualize, relies and analyze. Such expectations cannot be simply materialize in applied and normative sciences. Law is a normative science, its sources of study are found in law books as texts of legal principles and elements have been searched in complex social variables. Therefore, research in the field of law maintain its own methodology, which includes basic patterns applied in other social science research with distinct features and approach inevitable in legal research. Legal Research process is performed between two common methods i.e., doctrinal and empirical methods. Following any one method out of two require distinct sources of data, nature of data and their collection methods vary from one two another. Over all approach of research (procedural and technical) changes with individual method likewise changing in techniques of data collection is also inevitable.

3.1. Tools and Techniques of Data Collection in Doctrinal Research –

Traditional approach for legal research was centric to doctrinal method; even today doctrinal method is first choice of the researchers in law schools. The domain of doctrinal research mostly contain following technique in data collection as –

3.1.1. Library Research - Legal theories, principles and position of law may be easily referred by sitting in the library. Contents of the documents are self sufficient to be shown as good evidence of what law is on any issue of law and society, explanations, and object of law can be referred by bare reading of texts. That is why library research is most convenient way of data collection. Sources of data available within library are - Books, Journals, Reporters, Magazines, News Papers, Juristic work, Reports of (Seminar, conferences, symposiums, legislative, judicial and administrative proceedings), literature containing factual &

³ *Supra 1.*



philosophical information. Articles, Research papers, Thesis and Dissertations, Reports of Commissions, Court judgments and Case commentaries etc.

General source materials relating to problem, their background knowledge and knowledge of previous findings in similar cases is easily read in numerable available material in the library. Use of library is must to law researchers. He must seek proper guidance and aids which would facilitate him to know where to locate and how to look into the documents for searching relevant texts. Because, a stranger approach is very time consuming, frustrating and researcher get disinterested in further reading. Therefore, a systematic approach and scientific methods available in library science are very useful in success of library research.

Researcher, interested in using library technique firstly, search basic key terms in body of contents, subject index and glossary provided in the text sources.

Use of e-library is a modern and advance culture of legal research which is more efficient way to search on research material by pushing your figures on computer, Laptop and smart phones. Web source and print source are the basics to build up library researches.

3.1.2. Participation –

Participation technique is another common pattern of data collection in doctrinal as well as in empirical researches. Doctrinal studies can be performed by using either Library, participation or both techniques. The objective of Doctrinal-participative approach is to obtain knowledge by participating in any activity where relevant information may be obtain from verbal statements and presentations made by the persons credible for such information as expert, experienced or authoritative, not from the printing or web materials. It may be obtain by participations in Lectures, Seminars, Conferences, and Proceedings of (Academic, Administrative, Judicial and Legislative) are some common sources of data collection. Here the objective of participation for doctrinal research is only to receive information given by credible person relevant to study not to observe and analyze the source of information, like observation of source under empirical method.

Participation for data collection may be face to face or by modern means of technology i.e., video conferencing, Television, means of mass media and other means of communications.

3.2. Tools and Techniques for Data Collection in Empirical Research-

Techniques used in empirical legal researches are the same as used in other social science streams. Various techniques of data collection exist in social science researches with their specific tools. A systematic procedure or formula by which a complex or scientific task is accomplished. Techniques are the ways of gathering data, whereas tool refers to the instrument to be used in observing the method. The choice of the one or the other technique depends upon several factors like nature of the study; unit of inquiry; nature of the sample to be drawn; the standard of the representativeness



required; scale of the survey; the literacy levels of the respondents; the nature of the information required; availability of the human resources etc.⁴

The following are the important techniques used in empirical research-

- (i) Observation
- (ii) Interview
- (iii) Questionnaire
- (iv) Case Study
- (v) Survey
- (vi) Scaling

3.2.1. Observation Technique:

Observation method of data collection deals with the recording of behavior of the respondents or sampling units. In this technique researcher has to observe the required phenomenon by himself. By involving himself, researcher will be able to keep his eye on the entire activity for the accurate data and certain direct inferences. Observation provides an opportunity for empirical study that is first hands collection of facts and there is scientific precision in this method as facts and related information is collected in a natural situation. From observation, researcher can very well relate cause and effect relationship.⁵

Observation technique can be further classified as participating and non participating observation. Observation technique is rarely used in legal researches.⁶ C.A. Moser opines that "...In the strict sense observation implies the use of the eyes rather than of ear and the voice."⁷

Prof. Giri cites Oxford Concise Dictionary where Observation has been explained as "An accurate watching, noting of phenomenon as they occur in nature with regard to cause or effect or mutual relations."⁸

Jahoda and Cook in his treatise has explained observation in very simple words by saying "Observation is not only one of the most pervasive activities of daily life, it is a primary tool of scientific enquiry,"⁹

P.V. Young in her book *Scientific Social Survey and Research* defines observation as - "Observation, a deliberate study through the eyes may be used as one of the methods for scrutinizing collective behavior and complex social institutions as well as the separate units composing a totality."¹⁰

The purpose of observation technique is to study the existing phenomenon of human behavior. Though, to control human behavior is not easy, yet it is studied simply by control and uncontrolled observation. In uncontrolled observation, researcher, studies

⁴ T. Padma and K.P.C. Rao, *Legal Research Methodology*, (1st Asia Law House, Hyderabad 2011) 214

⁵ Noreen L. Channels, *Social Science Methods in the Legal Process* (1st, Rowman & Allanheld Publishers, New Jersey 1985) 148

⁶ Noreen L. Channels, *Social Science Methods in the Legal Process* (1st, Rowman & Allanheld Publishers, New Jersey 1985) 148

⁷ C.A. Moser, *Survey Methods In Social Investigation*, 1958 p. 168.

⁸ H.N. Giri, *Legal Research Methodology* (2nd, Pooja Law House, Indore 2014) 167

⁹ Ibid.

¹⁰ Ibid

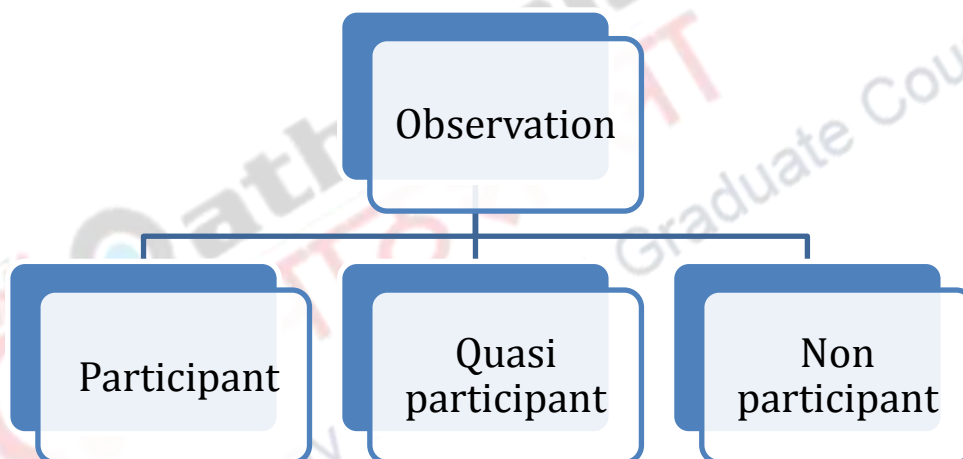


phenomenon without any interference in natural occurrence of phenomenon. Jahoda calls this observation as unstructured observation and P.V. Young call it simple observation. These observations are unguided, informal and independent observation. Uncontrolled observation is considered beneficial to research for following reasons –

1. In uncontrolled observation natural and real phenomenon as to human behavior is helpful in study.
2. It consist objectivity.
3. The dynamic social behavior can be well understood by uncontrolled observation.

Observation technique is considered vary important from hypothesis point of view. P.V. Young is of the view that the observed incidents have greater importance on research rather information received from other techniques. The object of observation is to study the complex social phenomenon, human nature, culture, pattern of human conduct.

Observation technique can be classified on the basis of role of researcher's participation in the phenomenon of observation as.



- Participant Observation** - Here researcher himself being actively remains associated with other members of the group and observes behavior and activities of the group of study. G.A. Lundberg says that “researcher actively keeps close relation with the observed group.” Prof. M.S. Gopal says that “in participant observation researcher in close relations of observe group studies the phenomenon more closely, correctly and comprehensively.”
- Quasi participant Observation** – In this kind of observation researcher does not remains all present to study group activities. He has to believe on his fellow researchers of the phenomenon when he is not present. In quasi participant observations the researcher takes parts in festivals, sports, in group fooding etc.
- Non participant Observation** – In this observation though the researcher remains present with observe persons but he studies their activities and behavior as a neutral person. He does not take part himself in the group. He remains limited to the causes of observation, environment, population or social life of the observed group.



3.2.2. Interview: Interview is commonly accepted technique of data collection where researcher enters into face to face interaction with any person or group for the purpose of seeking certain information as to the facts, idea or observation relevant to his research. Components of the interview are the researcher, the interviewer, interviewee and the interview environment. Where Researcher or any other person in his behalf enter in the role of interviewer and other person whose opinion, behavior and responses are observed logically for research objectives is called interview. Expected research data is synthesized from internal views of other person.

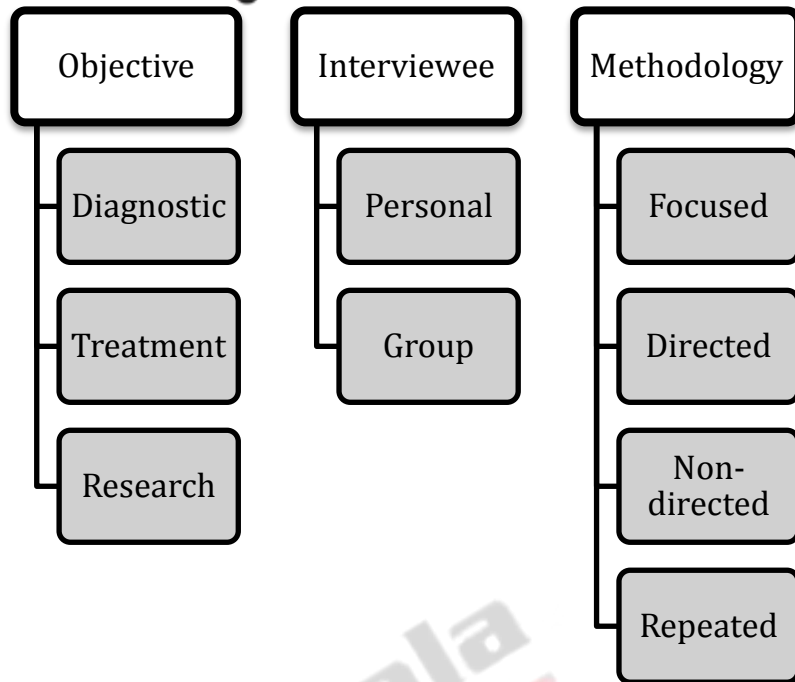
The purpose of the interview is to probe the ideas of the interviewees about the phenomenon of interest. Even terms abstractly related to the search are helpful, in that they may pull up documents that would otherwise not be found.¹¹

Interview is the process to know the opinion, information or observations of other person through verbal and non-verbal conversation initiated for specific purpose and focused on certain planned content areas. This method is preferred if such information cannot be adequately observed by other methods without entering into conversation only. Information cannot be easily obtained by this method, because the process depends on the interest and attentiveness and personal qualities of the interviewee. Though, apparently, it seems verbal communication but it is not mere verbal communication between interviewer and interviewee. But, more than that, involving even the study of body language. Mead opines that, gestures, glances, facial expressions, pauses, even a flick of an eye or mere silence can speak more than verbal exchanges. Behaviour can be judged and attitude can be estimated based upon blush in the face, or laugh, visible happiness or anger. The term itself denotes it is inter viewing, an interpersonal interaction.¹²

Interview can be classified on the basis of objectives, purpose and methods of research as -

¹¹ <http://alaworkshopdata.wordpress.com/data-collection-tools/>

¹² T. Padama & K P C Rao, Legal Research Methodology (1st, Asia Law House, Hyderabad) 249



On the basis of objectives of research indicators to lead the conversation and observation is prepared. Method of interviewing either grouped or individual is decided according to nature of information and convenience of researcher. Applied methodology of focused, directive, non-directive, repeated, casual or formal all decide according to objectives and purposes of interview. Above terms are self explanatory of their nature and objectives.

Selecting tools for interview and their construction is an important step of this method. Interview schedule, instruction guide or arrangement of substance and devices for recording of responses in physical and electronic mode is required.

Schedules occupy a central place and play a vital role in interview. Schedule is a formal document containing a set of questions formulated and asked to the interviewees with the specific purpose. Schedule may contain direct or indirect, objective or open ended questions.

3.3.3. Questionnaire -

Questionnaire is a most popular method of data collection for empirical legal research. It is a physical or electronic document consists of predetermined set of questions printed, typed or digitalized distributed sent to various persons for their response on such questions. Questionnaire is useful where observation and interview is not possible and in the opinion of researcher it would be just to collect information for objective and purposive satisfaction of research. He may design certain questions in the light of objectives, hypothesis and indicators of research. On each indicator there must be Question/s is/are designed and their language should be free from ambiguity, easy to understand and grammatically correct because responses are not made in presence of researcher so that any guidance and assistance can be provided if any difficulty arises in understanding them this is the limitation. Even it is not useful if respondents are illiterate or weak in language used in questionnaire. Therefore, before designing



questionnaire researcher must select expected target group on whom it would be administer and design accordingly.

Questionnaires may be supplied to respondents personally, by mail or internet. It works as mean and method both. Information from distant places can be easily accessed by the researcher economically.

3.3.4. Case Study - Case study is an in depth study of any unit from the beginning to end. Any person, family, institution, group, cast, community or nation may be the unit for the purpose of study.

By this study those qualities of unit are focused and analyzed which makes it distinct from other and special subject matter of study in which researcher is interested to know. It is a qualitative research method where all facts and information relating to such unit from the origin to last are collected by the researcher and all such conditions of life and their relations, and impact on unit is focused which makes it special.

P.V. Young defines as- "Case study is a method of exploring and analyzing the life of a social unit, be that unit a person, a family, institution or culture group even entire community."

Sources used for data collection may be internal or external. Internal data gather from such unit or within the unit is internal and any information taken from outer sources are external one. Researcher may use all possible ways and means for gathering information. If information taken from different sources are inconsistent, in such situation researcher has to adjudge prudently as to the admissibility between opposite information. Nature of information, interest of the information provider in professing such information and other relative information may be the decisive factors in deciding such issue.

More specifically it may be understand as a comprehensive study of facts of life, incidents or episode of life of any person, group, institution or entity for certain objectives.

In legal research study on legal history of India, Constitutional history of India, Judicial contribution of any Judge, academic contribution of any renounce educationist, and life of artist may be the examples of case study method.

3.3.4. Survey - Survey method is commonly used in social science and socio-legal researches. Before planning any policy or implementing schemes surveys may be conducted to know the experience, observation and opinion of peoples relating to subject. The term 'Survey' constitutes with two terms as 'Sur' or 'Sor' which means 'Over' and 'veir' or 'vor' which means to see. It means 'to see over' or 'to look over,' H.N. Morse defines social survey as "The social survey is a method of analysis in scientific and orderly form and for defined purposes of a given social situation or problem or population"

Survey is a process of collecting quantity of facts in systematic and organized manner to report any social problem or status of facts in certain area of society. Where the object of study is to search the information through real public experience, their opinion or feelings as to any of social importance.



After deciding to survey, the next requirement is to decide about the means of information. Mostly the information is obtained through schedule, questionnaire and personal interview. Before launching survey its units must be determined. It must be definite, appropriate in size so that generalized statement made on the basis of information must be coherent. The matter on which survey is conducted for the first time is called primary survey and thereby obtained is called 'primary data', subsequent survey on the same matter on same area or group is called 'secondary survey' and such data is 'secondary data'. Data obtained from survey can be used for limited purpose only to lay down the reality which is useful for making any policy matter. Data is only of persuasive nature not conclusive one.

3.3.5. Scaling- Scaling means to measure something by using any unit of measurement. Social attributes, personality traits and human behavior are non-measurable facts. Measurements are acceptable only in quantitative researches where the measurable facts are variables. Variables are those facts whose characteristics may vary & such variations are measurable. Facts studied in qualitative research are called "Non variables". Characteristics of non-variables is non measurable. Qualities cannot be measured i.e., honesty, dishonesty, integrity, love and enmity etc.

Scaling as a technique introduced by the social science researchers by which they have tried to measure social behavior and attributes of man by converting 'qualitative facts' into 'quantitative facts'.

It is a method of converting series of qualitative facts into quantitative facts and attributes are turned into variables. Working knowledge of statistics is necessary for analyzing responses obtained by scaling method.

Questionnaires and schedules are used as a source of applying this method. Questions are designed in objective form and their multiple answers are scaled numerically. For particular response certain scores are awarded and complete response of respondent is analyzed statistically and interpretation of data is made on probability basis.

4. **Summery** – Data collection is pivotal of whole research process. Proper balanced focus is necessary for data collection. Various tools and techniques are available for the data collection. But researcher should be skilled and experienced in administering tools for data collection. Data collection in doctrinal research can be performed by Library & participation technique. In doctrinal research common sources of data is either document (printed or digital) or, written or verbal communication from credible source of information. In empirical research various methods are available according to object and purpose of research, and nature of data and subject to other conditions of research. No method or technique is conclusive according to changing nature of social problems their studying techniques are also changing gradually.

5. **Glossary-**

Starting Character	Term	Definition	Related Term
D	Data	A series of observations, measurements, or facts; information usually in the form	



		of facts or statistics that can be analysed.
I	Interview	A conversation between two or more people where questions are asked by the interviewer to elicit facts or statements from the interviewee.
Q	Questionnaire	A research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents.
S	Scale	Concept, device or procedure used in arranging, measuring, or quantifying events, objects or phenomenon in any sequence.
	Schedule	A basic tool, consists of a list of actions are intended to take place, or of a sequence in the chronological order in which such things are intended to take place. The process of creating a schedule - deciding how to order these tasks and how to commit resources between the varieties of possible tasks is called scheduling.
	Survey	To view or consider in a comprehensive or general way to survey the situation.
T	Tools	Anything used as a means of accomplishing a task or purpose
	Techniques	The body of specialized procedures and methods used in any specific field of knowledge.