



RESEARCH METHODOLOGY

Methods of Data Collection

Raghu B. A.

Department of Computer Science and Engineering
raghubarao@pes.edu

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Ch. 6: Methods of Data Collection

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- 1) Introduction
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- 3) Types of Collection of Primary Data
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 - b) Interview Method
 - c) Through Questionnaires
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DATA COLLECTION

Primary Data Collection :

- Fresh
- First Time
- Original in character

Secondary Data Collection :

- Already collected by some one
- Already passed through statistical process



SURVEY Vs EXPERIMENT

Survey	Experiment
Descriptive research	Experimental research
Large number of data	Small Number of data
No manipulation	Deliberate Manipulation
Social and Behavioral Studies	Physical and Natural Studies
Data collection by observation, interview, group discussion	Data collection by repeated reading
Relationship between data and unknown can be studied through survey	Determine relationship between them
Casual analysis	Coorelation analysis



COLLECTION OF PRIMARY DATA

1. Observation Method
2. Interview Method
 - a. Personal Interview
 - b. Telephonic Interview
3. Questionnaires
4. Schedules
5. Other methods



OBSERVATION Method



- Related to Behavioral Sciences
- Non scientific method – to observe things around us
- Scientific tool -
 - systematically planned and recorded,
 - subjected to checks and
 - controls on validity and reliability.
- Information is sought by way of investigators own direct observation w/o asking respondents

Advantages :

1. Subjective bias is eliminated; if observation done accurately
2. Relates to current happenings
3. Independent of respondents

Limitations:

4. Expensive method
5. Limited information is provided
6. Unforeseen factors interfere
7. People may not be accessible

OBSERVATION



While using this method researcher should keep following in mind

- What should be observed?
- How observation should be recorded?
- How can accuracy be ensured?

Few Terminologies

- Structured Observation
 - Units, style, standardised conditions, pertinent data selection
 - Descriptive Studies
- Unstructured Observation
 - Exploratory Studies
- Participant Observation
- Non Participant Observation (Disguised Observation)
- Controlled and Non Controlled Observation.

INTERVIEW METHOD

Presentation of Oral Verbal Stimuli and reply in Oral Verbal Responses.

2 types

- Personal Interviews
- Telephonic Interviews



PERSONAL INTERVIEW METHOD

- Requires person as interviewer asking questions generally F2F contact with other person.
- **Direct Personal Interview** : Interviewer must collect info personally from sources concerned.
- He has to be on the spot and has to meet people from whom data has to be collected.
- **Indirect Personal Interview** : Interviewer cross examines other person who are supposed to have knowledge about the problem under investigation.



PERSONAL INTERVIEW METHOD



- Face to Face (F2F) contact with person / persons.
- Direct Personal Investigation (DPI) or indirect oral investigation.
- DPI- Interviewer collect information personally from sources concerned.
 - Be on the spot to meet people from whom data has to be collected.

Structured Interview:

- Method of collecting information through personal interview usually done in structured way.
- Predetermined set of questions.
- Rigid procedure asking the questions in the form and in prescribed order.

Unstructured Interview

- Flexible approach of questioning.
- Do not follow predetermined questions and standards.
- Interviewer allowed much greater freedom to ask, ask supplementary questions, omit certain questions.
- Allowed to change sequence of questions.

Focused Interview

Clinical Interview

Non Directive Interview

MERITS OF INTERVIEW METHOD

- More information in greater depth
- Greater flexibility to restructure questions.
- Observation – applied to recording verbal answers
- Personal information can be easily obtained.
- Low non responsive
- Interviewer can easily control which person will answer the questions.
- Language of the interview can be adopted easily, misinterpretations concerning questions can be avoided.

DEMERITS OF INTERVIEW METHOD

- Expensive – when large geographical locations are taken as samples.
- Few respondents may not be easily approachable.
- Time consuming when sample is large.
- Presence of interviewer may stimulate respondents.
- Selecting, training and supervising field staff is complex.

PREREQUISITES & BASIC TENETS OF INTERVIEW METHOD



- Interviewer should be carefully selected, trained and briefed.
- They should be honest, sincere and hardworking, must possess technical competence and necessary practical experience.
- Field checks should be made – to ensure interviewer is neither cheating nor deviating from instructions given.

TELEPHONIC INTERVIEW

- Method of collecting information contacting respondents over telephone.
- Not widely used, but plays important role in industry surveys.



Merits:

- 1) More flexible
- 2) Faster than other modes
- 3) Cheaper than personal interview
- 4) Replies can be recorded
- 5) Easy to call back
- 6) No field staff required
- 7) Higher rate of response than mailing method
- 8) Wider range of respondents

TELEPHONIC INTERVIEW



Demerits:

- 1) Little time given to respondents to answer
- 2) Extensive geographic coverage may be restricted because of cost.
- 3) Questions to be short, answers to the point
- 4) Survey is restricted to respondents with telephones
- 5) Not suitable for comprehensive answers.
- 6) Probability of bias of interviewer is relatively more

QUESTIONNAIRES METHOD

- Big enquiries – economic and business surveys.
- Being adopted by – private individuals, research workers, private and public organizations, governments.
- Questions are sent (by post) to persons concerned and required to answer and return.
- Consists of number of questions printed or typed in definite order on a form/s.
- Questionnaire is mailed to respondent/s who is expected to read and understand the questions and write down their replies in the space provided for the purpose.

QUESTIONNAIRE



Merits

1. Low cost even over large geographic area
2. Free from bias of interviewer
3. Respondents have adequate time to respond
4. Respondents who are not easily approachable can also be reached conveniently.
5. Large samples can be made use of, results can be reliable

Demerits

6. Low rate of return
7. Used when respondents are educated and cooperating.
8. Control over questionnaire may be lost when sent.
9. Inbuilt inflexibility – amending approach once dispatched.
10. Difficult to know whether willing respondents are truly representative.
11. Slowest of all methods.
12. Incomplete/ambiguous answers – hard to interpret.

QUESTIONNAIRE



Pilot Study may be required to test the questionnaire – rehearsal of main survey:

- Weakness of questionnaire may be identified
- Omission of questions
- Modification (reordering/rewording/rephrasing) of questions may be required – wrong interpretation of question by respondent

Main aspects of questionnaire:

a)General form

b)Question sequence

c)Question formulation and wordings

- Very clear in construction – simple, easily understood
- Open ended questions
- Multiple choice questions, True/False

Essentials of a good questionnaire:

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SCHEDULES

- The *schedule* is another data collection technique containing statements, questions, and blank spaces to fill up the answers given by the respondents to the enumerator or interviewer.
- A schedule is a structure of a set of questions on a given topic which are asked by the interviewer or investigator personally. ... It contains direct questions as well as questions in tabular form. Schedules include open-ended questions and close-ended questions.
- Schedules are filled by enumerators who are appointed for this purpose.
- These enumerators go to respondents, ask listed questions and record the replies.
- In few instances schedules may be handed over to respondents and enumerators may help them in recording answers.
- Enumerators should explain objectives of investigation and remove difficulty giving appropriate clarifications.

SCHEDULES

- **Benefits:**
 - It is a useful method in case the informants are illiterate.
 - The researcher can overcome the problem of non-response as the enumerators go personally to obtain the information.
 - It is very useful in extensive studies and
 - Can obtain more reliable data
- **Demerits**
 - Very expensive
 - Enumerator selection
 - Enumerators to be trained extensively

Differences between Questionnaires and Schedules:



Both questionnaires and schedules are popularly used methods of collecting data in research surveys. There is much resemblance in the nature of these two methods. From a practical point of view, the two methods can be taken to be the same. But from a technical point of view there are differences between the two.

The important points of differences are as under:

#	Questionnaires	Schedules
1	Filled out by the respondent.	Generally filled out by the research worker or the enumerator.
2	Relatively cheap and economical; no field staff required.	Relatively more expensive; appointing enumerators and in imparting training to them; preparing schedules also has costs.
3	Non-response is usually high; Bias due to non-response often remains indeterminate.	Generally Non-response very low; Since filled by enumerators who get answers to all questions; Danger of interviewer bias and cheating exists.
4	Not always clear as to who replies, respondent or someone on his/her behalf.	Identity of respondent is known to enumerator.
5	Personal contact is generally not possible.	Direct personal contact is established with respondents by enumerator.

Differences between Questionnaires and Schedules:

#	Questionnaires	Schedules
6	Personal contact is generally not possible.	Direct personal contact is established with respondents.
7	Can be used only when respondents are literate and cooperative.	Respondents may be illiterate.
8	Wider and more representative distribution of sample	Difficulty in sending enumerators over a relatively wider area.
9	Risk of collecting incomplete and wrong information is relatively high; particularly when people are unable to understand questions properly.	Relatively more accurate; Generally complete and accurate as enumerators can remove the difficulties, if any.
10	Success lies more on the quality of the questionnaire itself.	Depends upon the honesty and competence of enumerators.
11	Physical appearance of questionnaire must be quite attractive.	Not Applicable.
12	Not possible.	Observation method can also be used.

SECONDARY DATA COLLECTION

- Data already available – already collected and analysed by someone else.
- Researcher should look into sources from where s/he can obtain.
- 2 forms of secondary data:
 - Published
 - Unpublished.

SECONDARY DATA COLLECTION



Published -

- a) Publication in form of central, state and local government.
- b) Publication of foreign govt and international bodies.
- c) Technical and trade journals
- d) Books, magazines and newspapers
- e) Reports and publications of various business associations, industries, banks, stock exchanges, etc.
- f) Reports prepared by universities, scholars, economists
- g) public records and statistics, historical documents,
- h) websites - Ex : RBI, NSE, etc.

Unpublished

- Diaries, letters, biographies, autobiographies, also made available with scholars and workers, trade associations, etc.

SECONDARY DATA COLLECTION



Caution before using secondary data to see following characteristics:

1. Reliability of data:

- Who collected the data?
- What were the sources of data?
- Were they collected using proper methods?
- At what time were they collected?
- Was it achieved?

2. Suitability of data:

- Data suitable for one enquiry may not be suitable for another.
Hence if the data is found unsuitable it should not be used.

3. Adequacy of data:

- If the level of accuracy is found to be inadequate, it should not be considered for research.



THANK YOU

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