

RESEARCH METHODOLOGY

7. Methods of Data Collection

LESSON
SEVEN

EMGT 3172 (1:15)

B.A. (Special) Degree Program

Monday 10.30 am – 12.30 pm

Hall: EML

FACULTY OF SOCIAL SCIENCES AND HUMANITIES

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- 1. INTRODUCTION - Research and research methodology, characteristics of research, types of research, Steps involved in the research process**
- 2. SELECTION OF RESEARCH TOPIC - Importance of a research programme, types of research topics, selecting a research topic, criteria for selecting a research topic**
- 3. ANALYSIS & PROBLEM STATEMENT- Analysis of a problem, problem statement, points to be included in the problem statement**
- 4. LITERATURE REVIEW – Importance (why?), resources available for a review, Recording information obtained from literature**
- 5. RESEARCH OBJECTIVES – Need, general and specific objectives, specific objectives and hypotheses**

6. **RESEARCH METHODOLOGY** - Questions to consider, various components of the methods section
7. **METHODS OF DATA COLLECTION** – Stages of data collection, logistics, ensuring quality of data, types of data collection methods, handling data
8. **PARTICIPATORY RURAL APPRAISAL** – PRA techniques, types and objectives, conducting PRA
9. **WORKPLAN AND BUDGET** - Components in work plan, preparation of budget
10. **WRITING A RESEARCH PROPOSAL** – Important sections, logical approach

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Methods of Data Collection

Having decided on how to design the research study, the next step in the methodology is to decide how to collect information. The most commonly used methods of collecting information (quantitative data) are the use of documentary sources, interviews and self-administered questionnaires.



RESEARCH METHODOLOGY

LESSON SEVEN

METHODS OF DATA COLLECTION

Learning objectives

1. Understand the stages in the data collection process, logistics of data collection and how to ensure quality of data
2. Describe and understand the various types of data collection methods
3. Explain how to handle the data collected to ensure its correct use

Methods of Data Collection

Plan for Data Collection

1. You will have a clear overview of what tasks have to be carried out, who should perform them, and the duration of these tasks;
2. you can organize both human and material resources for data collection in the most efficient way;
3. you can minimize errors and delays which may result from lack of planning (for example, the population not being available or data forms being misplaced).

It is likely that while developing a plan for data collection you will identify problems (such as limited manpower), which will require modification of the proposal. Such modifications might include adjustment of the sample size or extension of the period for data collection.

Methods of Data Collection

Stages in the Data Collection Process

1. **Permission to proceed** - Consent must be obtained from the relevant authorities, individuals and the community in which the project is to be carried out. This may involve organizing meetings at national or provincial level, at district and at village level.
2. **Data collection** - Logistics: who will collect what, when and with what resources and Quality control
3. **Data handling** – Once the data have been collected and checked for completeness and accuracy, a clear procedure should be developed for handling and storing them. Decide if the questionnaires are to be numbered; identify the person who will be responsible for storing the data; and how they are going to be stored.

Methods of Data Collection

Logistics of data Collection

WHO will collect
WHAT data?

When allocating tasks for data collection, it is recommended that you first list them. Then you may identify who could best implement each of the tasks. If it is clear beforehand that your research team will not be able to carry out the entire study by itself, you might plan to look for research assistants to assist in relatively simple but time-consuming tasks



Lesson

Methods of Data Collection

Logistics of data Collection

HOW LONG will it take to collect data ?

Step 1: Consider:

1. The time required to reach the study area(s);
2. The time required to locate the study units (persons, groups, records); If you have to search for specific informants it might take more time to locate informants than to interview them.
3. The number of visits required per study unit. For some studies it may be necessary to visit informants a number of times, for example if the information needed is sensitive and can only be collected after informants are comfortable with the investigator or if observations have to be made more than once. Time needed for follow-up of non-respondents should also be considered.

Methods of Data Collection

Logistics of data Collection

HOW LONG will it take to collect data ?

Step 2: Calculate the number of interviews that can be carried out per person per day

Step3: Calculate the number of days needed to carry out the interviews. For example:

1. You need to do 200 interviews,
2. Your research team of 5 people can do $5 \times 4 = 20$ interviews per day,
3. You will need $200:20 = 10$ days for the interviews.

Step 4: Calculate the time needed for the other parts of the study, (for example, 10 days)

Step 5: Determine how much time you can devote to the study.

Methods of Data Collection

Logistics of Data Collection

WHEN should the data be collected?

The type of data to be collected and the demands of the project will determine the actual time needed for the data to be collected. Consideration should be given to:

1. Availability of research team members and research assistants,
2. The appropriate season(s) to conduct the field work (if the problem is season-related or if data collection would be difficult during certain periods),
3. Accessibility and availability of the sampled population, and
4. Public holidays and vacation periods.

Methods of Data Collection

Measures to Ensure Quality (reliability and validity)

1. Prepare a field work manual for the research team as a whole
2. Select your research assistants, if required, with care
3. Train research assistants carefully in all topics covered in the field work manual as well as in interview techniques
4. Pre-test research instruments and research procedures
5. Take care that research assistants are not placed under too much stress
6. Arrange for on-going supervision
7. Devise methods to assure the quality

Methods of Data Collection

Method: 1. Use of Documentary Sources

Advantages:

- Documents can provide ready made information relatively easily
- The best means of studying past events.

Disadvantages:

- Problems of reliability and validity (because the information is collected by a number of different persons who may have used different definitions or methods of obtaining data).
- There is a possibility that errors may occur when the information is extracted from the records. (This may be an important source of unreliability if handwritings are difficult to read.
- Since the records are maintained not for research purposes, but for clinical, administrative or other ends, the information required may not be recorded at all, or only partly recorded.

Methods of Data Collection

- Method: 2.
Questionnaire Survey

Questions may take two general forms: they may be “Open ended” questions, which the subject answers in his own words, or “closed” questions, which are answered by choosing from a number of fixed alternative responses.



In designing questionnaires remember!!

- Use familiar and appropriate language
- Avoid abbreviations, double negatives, etc.
- Avoid two elements to be collected through one question
- Pre-code the responses to facilitate data processing
- Avoid embarrassing and painful questions
- Watch out for ambiguous wording
- Avoid language that suggests a response
- Start with simpler questions
- Ask the same question to all respondents
- Provide other, or don't know options where appropriate



In designing questionnaires remember!!

- Provide the unit of measurement for continuous variables (years, months, kgs, etc.)
- For open ended questions, provide sufficient space for the response
- Arrange questions in logical sequence
- Group questions by topic, and place a few sentences of transition between topics
- Provide complete training for interviewers
- Pretest the questionnaire on 10-15 respondents in actual field situation
- Check all filled questionnaire at field level
- Include “thank you” after the last question

