

Research Methodology

Lecture 7: Methods of Data Collection

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1

Methods Of Data Collection

- Common methods include:
 1. **Participatory Methods**
 2. **Records and Secondary Data**
 3. **Observation**
 4. **Surveys and Interviews**
 5. **Focus Groups**
 6. **Diaries, Journals, Self-reported Checklists**
 7. **Expert Judgment**
 8. **Photograph, videotape, slides**
 9. **Other Tools**

2

Methods Of Collection Of Data

- There are two major approaches to gathering information about a situation, person, problem or phenomenon.
- When you undertake a research study, in most situations, you need to collect the required information; however, sometimes the information required is already available and need only be extracted. Based upon these broad approaches to information gathering, data can be categorized as:

- 1. Primary Data**
- 2. Secondary Data**

3

Collection of Primary Data

- There are several methods of collecting primary data. These are:-
- 1. Surveys**
 - 2. Focus groups**
 - 3. Questionnaires**
 - 4. Personal interviews**
 - 5. Experiments and observational study**

4

Collection of Secondary Data

- Secondary data means data that is already available and there are some of the many secondary sources grouped into categories.
1. **Government or semi-government publications** – There are many government and semi-government organizations that collect data on a regular basis in a variety of areas and publish it for use by members of the public and interest groups. Some common examples are the census, vital statistics registration, labour force surveys, health reports, economic forecasts and demographic information.

5

Collection of Secondary Data

2. **Earlier research** – For some topics, an enormous number of research studies that have already been done by others can provide you with the required information.
3. **Personal records** – Some people write historical and personal records (e.g. diaries) that may provide the information you need.
4. **Mass media** – Reports published in newspapers, in magazines, on the Internet, and so on, may be another good source of data.

6

Secondary Data – Advantages

1. **No need to reinvent the wheel.**
 - If someone has already found the data, take advantage of it.
2. **It will save you money.**
 - Even if you have to pay for access, often it is cheaper in terms of money than collecting your own data. (more on this later.)
3. **It will save you time.**
 - Primary data collection is very time consuming. (More on this later, too!)
4. **It may be very accurate.**
 - When especially a government agency has collected the data, incredible amounts of time and money went into it. It's probably highly accurate.

7

Secondary Data – Disadvantages

- When using data from secondary sources you need to be careful as there may be certain problems with the availability, format and quality of data.
1. **Validity and reliability** – The validity of information may vary markedly from source to source. For example, information obtained from a census is likely to be more valid and reliable than that obtained from most personal diaries.
 2. **Personal bias** – The use of information from personal diaries, newspapers and magazines may have the problem of personal bias as these writers are likely to exhibit less rigorousness and objectivity than one would expect in research reports.

8

Secondary Data – Disadvantages

3. **Availability of data** – It is common for beginning researchers to assume that the required data will be available, but you cannot and should not make this assumption. Therefore, it is important to make sure that the required data is available before you proceed further with your study.
4. **Format** – Before deciding to use data from secondary sources it is equally important to ascertain that the data is available in the required format. For example, you might need to analyze age in the categories 23–33, 34–48, and so on, but, in your source, age may be categorized as 21–24, 25–29, and so on.

9

Processing And Analysis Of Data

- The data, after collection, has to be processed and analyzed . Analysis of data means to make the raw data meaningful or to draw some results from the data after the proper treatment.
1. **Editing**
 2. **Coding**
 3. **Classification**
 4. **Tabulation**

10

Electronic Data Collection

- Due to Computer technologies are increasingly become more reliable and cost-effective . Most researcher in these days use some form of electronic data collection methods.

1. **Primary:** Such as web forms, tablet PCs, PDAs and so on.
2. **Secondary:** Such as EHR, capture of billing data and so on.

11

Benefits of Electronic Data Collection

- There are several benefits associated the electronic data collection tools. These are:-
 1. Rapid distribution of data collection forms
 2. Eliminates paper shuffle on both ends: opening, sorting, completing, checking, copying, folding, labeling, mailing, etc.
 3. Rapid and secure transfer of collected data.
 4. Eliminates need for manual data entry.
 5. Can result in improved data quality.
 6. Can reduce time from study launch to publication.

12

The End

13