

Module 3 Part 3 Methods of data collection – Survey Research
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Module 3

Part 3

Methods of data collection – Survey Research

SI NO	Title of the Topic	Page No
3.3.1	Survey – meaning, features, objectives, advantages and disadvantages	2-5
3.3.2	Methods of Survey Research	6-10
3.3.3	Cross sectional study	
3.3.5	Longitudinal study& its types	11-14
3.3.6	Other methods of survey research	15

Module 3 Part 3 Methods of data collection – Survey Research
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What is a survey?

A survey is a research method used for collecting data from a predefined group of respondents to gain information and insights into various topics of interest. They can have multiple purposes, and researchers can conduct it in many ways depending on the methodology chosen and the study's goal. Survey research is one of the most important areas of measurement in applied social research.

The data is usually obtained through the use of standardized procedures to ensure that each respondent can answer the questions at a level playing field to avoid biased opinions that could influence the outcome of the research or study. The process involves asking people for information through a questionnaire, which can be either online or offline. However, with the arrival of new technologies, it is common to distribute them using digital media such as social networks, email, QR codes, or URLs.

Survey Research is defined as the process of conducting research using surveys that are sent to survey respondents. The data collected from surveys is then statistically analyzed to draw meaningful research conclusions.

In business studies survey method of primary data collection is used in order to test concepts, reflect attitude of people, establish the level of customer satisfaction, conduct segmentation research and a set of other purposes. Survey method can be used in both, quantitative, as well as, qualitative studies.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Survey method pursues two main purposes:

1. Describing certain aspects or characteristics of population and/or
2. Testing hypotheses about nature of relationships within a population.

Features of surveys

1. It is a field study.
2. It seeks responses directly from the respondents.
3. It can cover a very huge population.
4. It is an extensive as well as intensive study.
5. It covers a definite geographical area.

Objectives of survey

1. To provide information to Govt. or planners or business enterprises.
2. To explain a phenomenon.
3. To make comparison of demographic groups
4. To know the cause and effect relationship for making predictions.

In the 21st century, every organization's eager to understand what their customers think about their products or services and make better business decisions. Research can be conducted in multiple ways but surveys are proven to be one of the most effective and trustworthy research methods. An online survey is classified as a method for extracting information about a significant business matter from an

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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individual or a group of individuals and consists of structured survey questions that motivate the participants to respond.

A credible survey research can give these businesses access to a colossal information bank. Organizations in media, other businesses, and even governments rely on survey research to obtain accurate data.

The traditional definition of survey research is a quantitative method for collection of information from a pool of respondents by asking multiple survey questions. This research type includes recruitment of individuals, collection, and analysis of data. It's useful for researchers who aim at communicating new features or trends to their respondents.

Generally, it's the primary step towards obtaining quick information about mainstream topics and conducting more rigorous and detailed quantitative research methods like surveys/polls or qualitative research methods like focus groups/on-call interviews can follow. There are many situations where this research can be conducted using a blend of both, qualitative and quantitative strategies.

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	Advantages of Survey Method	Disadvantages of Survey Method
1	Surveys can be conducted faster and cheaper compared to other methods of primary data collection such as observation and experiments	In some cases, unwillingness or inability of respondents to provide information Human bias of respondents, i.e. respondents providing inaccurate information
2	Primary data gathered through surveys are relatively easy to analyze	Differences in understanding: it is difficult to formulate questions in such a way that it will mean exactly same thing to each respondent

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Survey Research Methods

Cross-Sectional Research

Cross-sectional research can be exploratory, descriptive, or explanatory, but it is most consistent with a descriptive approach.

We can use longitudinal studies for exploratory, descriptive, and explanatory purposes. Usually more complicated and costly to conduct than cross-sectional research, longitudinal studies are more powerful. **We now consider three types of longitudinal research: time series, panel, and cohort.**

Survey research methods can be derived on the basis of two critical factors: Survey research tool and time involved for conducting research.

Longitudinal Survey Research: Longitudinal survey research involves conducting survey research over a continuum of time, which may be spread across years and decades. The data collected using this survey research method from one time period to another, is qualitative or quantitative in nature. Respondent behavior, preferences, attitudes are observed constantly over time to analyze reasons for change in behavior or preferences.

For example, if a researcher intends to learn about eating habits of teenagers, he/she will follow a sample of teenagers over a considerable period of time to ensure that the collected information is reliable.

Longitudinal survey research is often followed by cross-sectional survey research.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
Christ College (Autonomous) Irinjalakuda

Cross-sectional Survey Research: Cross-sectional survey research is conducted to collect insights from a target audience at a particular time interval. This survey research method is implemented in various sectors such as retail, education, healthcare, SME businesses etc. Cross-sectional survey research can either be descriptive or analytical in nature. This survey research method is quick and helps researchers collect information in a brief time span. Researchers rely on cross-sectional survey research method in situations where descriptive analysis of a subject is required.

What is Cross-Sectional Study?

Cross-sectional study is defined as an observational study where **data is collected as a whole to study a population at a single point in time to examine the relationship between variables of interest.**

1. In an observational study, a researcher records information about the participants without changing anything or manipulating the natural environment in which they exist.
2. The most important feature of a cross-sectional study is that it can **compare different samples at one given point in time.**

For example, a researcher wants to understand the relationship between joggers and level of cholesterol, he/she might want to choose two age groups of daily joggers, one group is below 30 but more than 20 and the other, above 30 but below 40 and compare these to cholesterol levels amongst non-joggers in the same age categories.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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The researcher at this point in time can create subsets for gender, but cannot consider past cholesterol levels as this would be outside the given parameters for cross-sectional studies.

3. Cross-sectional studies **allow the study of many variables at a given time.** Researchers can look at age, gender, income etc in relation to jogging and cholesterol at a very little or no additional cost involved.
4. However, there is one downside to cross-sectional study, this type of study is not able to provide a definitive relation between cause and effect relation (a cause and effect relationship is one where one action (cause) makes another event happen (effect), for example, without an alarm, you might oversleep.)
5. This is majorly because cross-sectional study offers a snapshot of a single moment in time; this study doesn't consider what happens before or after. Therefore in this example stated above it is difficult to know if the daily joggers had low cholesterol levels before taking up jogging or if the activity helped them to reduce cholesterol levels that were previously high.

Field study

Field research is defined as a qualitative method of data collection that aims to observe, interact and understand people while they are in a natural environment. For example, nature conservationists observe behavior of animals in their natural surroundings and the way they react to certain scenarios. In the same way, social scientists conducting field research may conduct interviews or observe people from a distance to understand how they behave in a social environment and how they react to situations around them.

It is the in- depth study of a problem.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Eg , reaction of young men and women towards a product.

Test marketing is an example of field study.

 **Field survey**





It is one of the traditional modes of survey data collection (along with telephone and mail). In field surveys, which are also referred to as face-to-face or personal-visit surveys, an interviewer visit the respondent's home or office (or another location) and conducts the interview. Large sample are covered under this study.

The researcher has good knowledge about the construction of questionnaire, sampling techniques etc.

Demerit –

1. high cost
2. time consuming

eg . Suppose the management believes that geographical factor is an important attribute in determining the consumption of a product, like sales of a woollen wear in a particular location. Suppose that the proposition to be examined is that, the urban population is more likely to use the product than the semi- urban population. This hypothesis is examined in a cross sectional study. Measurement can be taken from a representative sample of the population in both geographical locations with respect to the occupation and use of the product. In case of tabulation, researcher can count the number of cases that fall into each of the following classes:

-  urban population which uses the product- category -1
-  semi- urban population which uses the product- category -2
-  urban population which does not use the product- category -3
-  semi- urban population which does not use the product- category -4

Then test the sample data to draw conclusions.

What is Longitudinal Study?

Longitudinal study, like the cross-sectional study, is also an **observational study**, in which data is gathered from the same sample repeatedly over an extended period of time. Longitudinal study can last from a few years to even decades depending on what kind of information needs to be obtained.

1. The benefit of conducting longitudinal study is that researchers can make notes of the changes, make observations and detect any changes in the characteristics of their participants. One of the important aspects here is that longitudinal study extends beyond a single frame in time. As a result, they can establish a proper sequence of the events occurred.
2. Continuing with the example, in longitudinal study a researcher wishes to look at the changes in cholesterol level in women above the age of 30 but below 40 years who have jogged regularly over the last 10 years. In longitudinal study setup, it would be possible to account for cholesterol levels at the start of the jogging regime, therefore longitudinal studies are more likely to suggest a cause-and-effect relationship.
3. Overall, research should drive the design, however, sometimes as the research progresses it helps determine which of the design is more appropriate. Cross-sectional studies can be done more quickly as compared to longitudinal studies. That's why a researcher may start off with cross-sectional study and if needed follow it up with longitudinal studies.

Differences between Cross-Sectional Study and Longitudinal Study

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Cross-sectional and longitudinal study both are types of observational study, where the participants are observed in their natural environment. There are no alteration or changes in the environment in which the participants exist.

Despite this marked similarity, there are distinctive differences between both these forms of study. Let us analyze the differences between cross-sectional study and longitudinal study.

Cross-sectional study	Longitudinal study
Cross-sectional studies are quick to conduct as compared to longitudinal studies.	Longitudinal studies may vary from a few years to even decades.
A cross-sectional study is conducted at a given point in time.	A longitudinal study requires a researcher to revisit participants of the study at proper intervals.
Cross-sectional study is conducted with different samples.	Longitudinal study is conducted with the same sample over the years.
Cross-sectional studies cannot pin down cause-and-effect relationship.	Longitudinal study can justify cause-and-effect relationship.
Multiple variables can be studied at a single point in time.	Only one variable is considered to conduct the study.
Cross-sectional study is comparatively cheaper.	Since the study goes on for years longitudinal study tends to get expensive.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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A number of different designs are available for the construction of longitudinal surveys. They are:

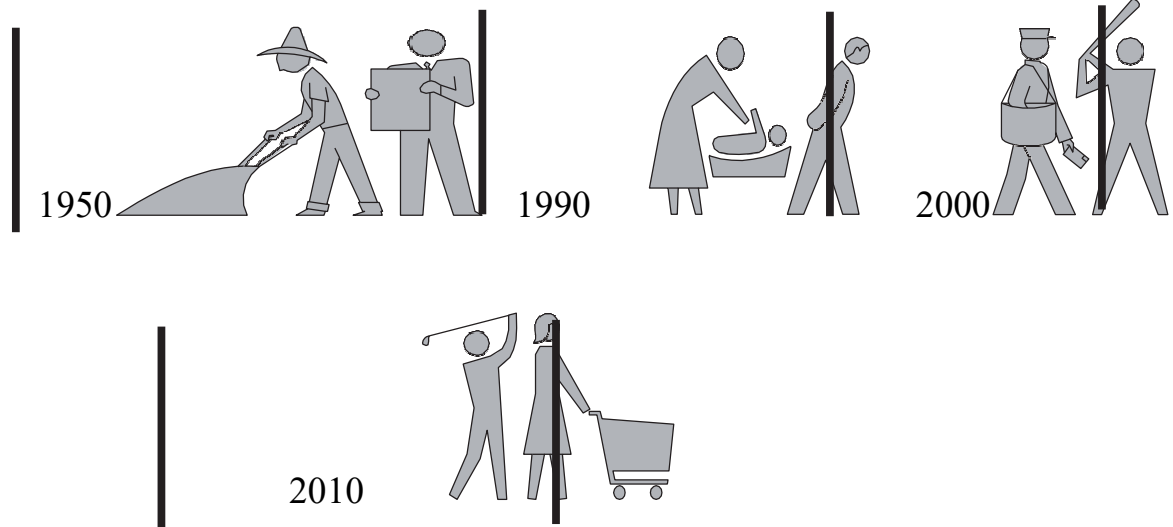
- Trend studies
- Panel surveys
- Cohort panels.

Trend or time series Studies:

Time-series research is a longitudinal study in which data are collected on a category of people or other units across multiple time points. It enables researchers to observe stability or change in the features of the units or can track conditions over time. It is one of longitudinal surveys consisting of a series of cross-sectional surveys conducted at two or more points in time, with a new sample on each occasion are known as trend studies. But it should be ensured that the new sample is from the same category or segment of population originally surveyed, as trend studies focus on the changing patterns of a particular population. Since each survey brings out the existing trend at a particular point of time, data from several cross-sectional studies of the same population can be integrated and a time trend analysis can be established into the longitudinal survey. This can be done by using consistent questions in each of the cross-sectional studies.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
Christ College (Autonomous) Irinjalakuda

TIME SERIES: Observe different people at multiple times.



Cohort Panels:

Cohorts (from the Latin 'cohors' meaning 'crowd') are groups of people who share a common demographic. For example, this could be the birth year or the year they started working, or certain historical events etc. The term 'generation' is often used. When a cohort analysis (also referred to as a 'cohort study') is carried out, the **behavioral changes of the defined groups of people over the time period they are examined.** Once you've collected the data, you can either:

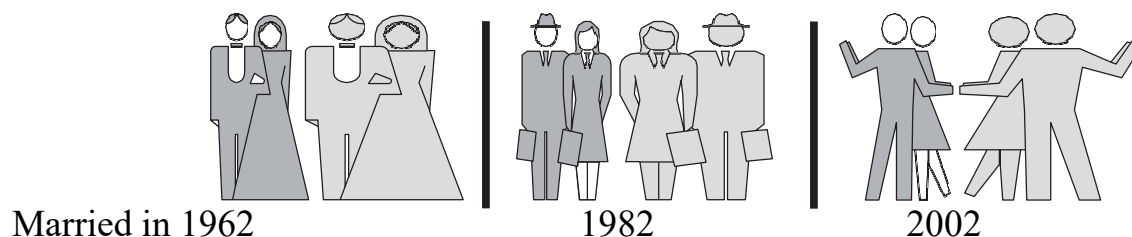
Obtain an accurate picture of the underlying cohorts (intra cohort study), in order to analyze, for example, the development of the birthrate and the change in consumer behavior (either over a long period, or on a random basis).

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Make a comparison with at least one other group of people (inter cohort study), in order to obtain.

A cohort is defined as those people within a geographically or otherwise delineated population who experienced the same significant life event within a given period of time. Cohort panels can be considered as a specific form of panel study that takes the process of generation replacement explicitly into account. Thus, one or more generations are followed over their life course. The study usually probes into the long-term changes and the individual development processes. If in each particular generation the same sample people are investigated, a cohort study amounts to a series of panel studies whereas, if a new sample of respondents is drawn in each generation, in each period of observation, a cohort study consists of a series of trend studies.

COHORT: Observe people who shared an experience at two or more times.

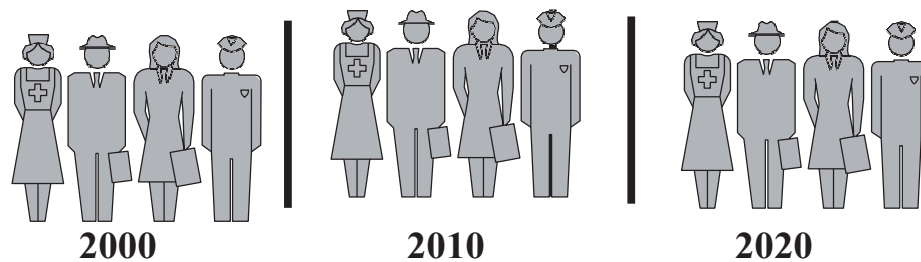


Module 3 Part 3 Methods of data collection – Survey Research
Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Panel Surveys: *A longitudinal survey that involves collecting data from the same sample of individuals or households across time is called a panel survey. The selected sample is called a panel. Panel surveys enable the researcher to detect and establish the nature of changes occurring in the population over a period of time.*

These changes can be traced to the level of the individual as the surveys are conducted on the same panel over a period of time. A particular sample of interviewees might respond or react to an impulse in a certain way, which might differentiate them from others over a period of time. The very basis of longitudinal surveys lies in detecting these changes. Although they provide highly specific information, they have certain drawbacks. They are time-consuming, expensive and are also known to have high attrition rates as people often drop out of the study.

PANEL: Observe the exact same people at two or more times.



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Types of panels

True panel

It involves repeat measurement of the same variables. Eg; a researcher takes a sample of students and asks questions about the availability of books in their college library. The same sample of students is asked the same questions next year and so on. The students are asked to justify any variations in their opinion.

Omnibus panel

A sample of elements is being selected and maintained, but the information collected from the member varies.

Eg . attitude of panel members “towards an advertisement” may be measured. At some other point time the same panel member may be questioned about the “product performance”

Demerit

Difficult to conduct- expensive , time consuming

Difficult to trace the members of the same sample again and again.

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Methods of survey

- Regular survey is conducted after regular intervals.
- Adhoc survey is conducted for certain purposes.
- Census survey – the entire population is studied.
- Sample survey- part of population is studied.
- Primary survey- acquire directly the relevant data.
- Secondary survey- after primary survey has been completed.

Methods for survey data collection

- **Personal interview**-the interviewer ask questions face- to – face with the interviewee.

It can be take place at home, shopping mall, on the street and so on.

- **Telephone survey**- it is the process of collecting information from sample respondents by calling them over telephone.
- **Computer direct interview**- the respondents enter their answers directly into the computer.
- **Email survey**- it need a web server to construct, distribute and manage result. It works with the existing email system making on-line questionnaire available to anyone with an internet connection.
- **Internet survey**- it is a self administered questionnaire posted on web site. The respondents can answer that questionnaire.
- **Mail survey**- Questionnaire sent to selected respondents to fill and post filled questionnaire back to the researcher.
- **Pop-up survey**-The entire survey is generated through script. We designed the survey to be easily changes with minimal code updating. Below is the

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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complete client-side script for displaying the survey window. To force the display of the survey to occur as soon as the page starts downloading, include this script in the HEAD section of your page.

Factors influencing the choice of survey methods

- Speed -email, web page, telephone
- Cost- Personal interview, telephone, mail.
- Internet usage- email, web page
- Literacy level- Personal interview
- Sensitive questions- Computer directed survey

Video, sound and graphic- telephone email, web page ,Computer directed survey

Census and Sample survey

A census is a study of every unit, everyone or everything, in a population. All items in any field of inquiry constitute a ‘Universe’ or ‘Population.’ A complete enumeration of all items in the ‘population’ is known as a census inquiry. It can be presumed that in such an inquiry, when all items are covered, no element of chance is left and highest accuracy is obtained.

When field studies are undertaken in practical life, considerations of time and cost almost invariably lead to a selection of respondents i.e., selection of only a few items. The respondents selected should be as representative of the total population as possible in order to produce a miniature cross-section. The selected respondents constitute what is technically called a ‘sample’ and the selection process is called ‘sampling technique.’ The survey so conducted is known as ‘sample survey’.

Module 3 Part 3 Methods of data collection – Survey Research
Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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There are three main survey research methods, divided based on the **medium of conducting survey research**:

✚ **Mail survey**

A mail survey is one in which the postal service, or another mail delivery service, is used to mail the survey materials to sampled survey addresses. What is mailed usually consists of a cover letter, the survey questionnaire, and other materials, such as a postage-paid return envelope, an informational brochure to help legitimize the survey organization, detailed instructions about how to participate in the survey, and/or a non contingent cash incentive.

In some mail surveys, it is the household or the business at the address that is sampled, but in other mail surveys it is a specific person at the address who is sampled.

✚ **Online/ Email-Online survey research** is one of the most popular survey research methods in this day and age.

✚ What is an online survey?

An online survey is a set of structured questions that the respondent completes over the internet, generally through filling out a form. It is a more natural way to reach out to the respondents as it is less time consuming than the traditional way of gathering information through one to one interaction and less expensive. The data is collected and stored in a database, which is later evaluated by an expert in the field. Online surveys have now become the most widely used survey data collection method. There is a wide variety of advanced and straightforward question types that are available in online surveys. The data collection and data analysis are now structured and easy to

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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manage. The survey response online is very high compared to other research options.

 **What are the advantages of an online survey?**

Accuracy: In an online research study, the margin of error is low, as the respondents register their responses by easy selection buttons. Traditional methods require human interference, and according to a study, human intervention increases the margin of error by 10%.

Easy and quick to analyze: Since all the responses are registered online, it is straightforward to analyze the data in real-time. It is also ready to draw inferences and share the result.

Ease of participation: In this new age technology-oriented universe, most people on this planet have access to the internet. Respondents prefer receiving the survey over the email. Ease of participation dramatically increases as the respondents can choose a suitable time and place, according to their convenience, to register their responses.

Great branding exercise: In an online design, organizations or businesses have this opportunity to develop their questionnaire to align with their brand. Using logos and similar brand language (color and fonts) gives the companies an advantage as respondents can connect better with the brand.

Respondents can be honest and flexible at the same time: According to a study, researchers have found increased participation by respondents when deployed with online surveys rather than answering lengthy questions. By designing questionnaires that ask relevant questions, respondents are honest with their answers and can skip the questions or respondents to a more neutral option, increasing their flexibility to respond.

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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Survey templates: Leading online research tools have expert-designed ready survey templates that make it easier for researchers to choose from and conduct their research study. These templates are vetted questionnaires and are specific to every industry, making the study even more efficient.

Survey data collection

The methods used to collect survey data have evolved with time. Researchers have increasingly moved away from paper surveys to using quick, online questionnaires for survey data collection method has its pros and cons, and the researcher has to, in most cases, use different ways to collect the requisite data from a sample.

The survey response rates of each of these methods vary as multiple factors like time, interest, incentive, etc. play a role in the data collection process.

The cost involved in online survey research is extremely minimal and the responses gathered are highly accurate but the only drawback of this survey research method is that the response rates are lower compared to the other mediums.

✚ **Telephone -Survey research:** Telephone surveys are a cheaper method than face-to-face surveys and less-time consuming too. Contacting respondents via the telephonic medium requires less effort and human resources. Still, the survey response rate could be debatable as respondents aren't very trusting to give out information on the call. In this survey data collection method, the researcher also has less scope to digress from the survey flow.

Face-to-face- survey

✚ *Face-to-face surveys are on the most widely used methods of survey data collection. The survey response rate in this survey data collection method is*

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Dr Josheena Jose, Assistant Professor, PG Department of Commerce
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always higher because the respondent trusts the researcher since it is in-person. The survey design in this research method is planned well in advance, but there is so scope to digress to collect in-depth data. In situations where there is a complicated problem to solve, face-to-face survey research can be conducted. The response rate of this method is the highest but it can be extremely expensive.

✚ **Paper or print:** The least used survey data collection method that is now being used mostly in field research is paper surveys. Researchers and organizations are moving away from using this method since they are logistically tough to manage and tough to analyze. These can be used where laptops, computers, and tablets cannot go, and hence they use the age-old method of data collection; pen and paper.

Conclusion

It is true; study design greatly depends on the nature of research questions. Whenever a researcher decides to collect data by deploying surveys to his/her participants, what matters the most are the survey questions that are placed tactfully, so as to gather meaningful insights.

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