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Topic: Identification of data collection Methods

What are data collection methods?

In the age when "Information is power", how we gather that information should be one of our major concerns. Also, which of the many data collection methods is the best for our particular needs?

Why collect data?

Data collection is defined as the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypothesis and evaluate outcomes.

Quantitative and Qualitative data

Quantitative data

This type of data deals with things that are measurable and can be expressed in numbers or figures, or using other values that express quantity. That being said, quantitative data is usually expressed in numerical form and can represent size, length, duration, amount, price and so on.

Quantitative research is most likely to provide answers to questions such as Who? When? Where? What? and how many?

Quantitative survey questions are in most cases closed-ended and created in accordance with the research goals, thus making the answers easily transformable into numbers, charts, graphs and tables.

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quantitative data is numeric and measurable, it lends itself well to analytics. When we analyse quantitative data, we may uncover insights that can help us better understand our audience. Because this kind of data deals with numbers, it is very objective and has a reputation for reliability.

Qualitative data

Qualitative data is descriptive, rather than numeric. It is less concrete and less easily measurable than quantitative data. This data may contain descriptive phrases and opinions. Example include an online review a customer writes about a product. Qualitative data helps explain the 'why' behind the information quantitative data reveals. For this reason, it is useful of supplementing quantitative data, which will form the foundation of our data strategy.

As quantitative data is so foundational, now we will focus on collection methods for quantitative primary data.

How to collect data

There are many different techniques for collecting different types of quantitative data, but there is a fundamental process we will typically follow, no matter which method of data collection we are using. This process consists of the following five steps:

1. Determine what information we want to collect:

The first thing we need to do is to choose what details we want to collect. We will need to decide what topics the information will cover, who we want to collect it from and how much data we need. Our goals - what we hope to accomplish using our data - will determine our answers to these questions.

2. Set a Timeframe for Data Collection

Next, we can start formulating our plan for how we will collect our data. In the early stages of our planning process, we should establish a ~~the~~ time frame for our data collection. We may want to gather some types of data continuously.

3. Determine your Data Collection Method:

At this step, we will choose the data collection method that will make up the core of our data-gathering strategy. To select the right collection method, we will need to consider the type of information we want to collect, the timeframe over which we will obtain it and the other aspects we determined.

4. Collect the Data

Once we have finalized our plan, we can implement our data collection strategy and start collecting data. We can store and organize our data in our different devices. Be sure to stick to our plan and we should check on its progress regularly. It may be useful to create a schedule for when we will check it in with how our data collection is proceeding, especially if we ~~are~~ collect data continuously.

5. Analyze the Data and Implement Our Findings:

Once we have collected all of our data, it is time to analyze it and organize our findings. The analysis phase is crucial because it turns raw data into valuable insights that we can use to enhance our understanding of the problems.

Ways to Collect Data

How do we go about collecting the data we need to meet our goals? There are various methods of collecting primary quantitative data. Some involve directly asking ~~customers~~ individuals for information, some involve monitoring our interactions with people and others involve observing other individuals' behaviors. The right one to use depends on the goals and the type of data we are collecting.

Now we discuss some of the most common types of data collection methods or techniques we use today.

Surveys

Surveys are one way in which we can directly ask respondents for information. We can use them to collect either quantitative or qualitative data or both. A survey consists of a list of ~~and~~ queries respondents can answer in just one or two words and often gives participants a list of responses to choose from. We can conduct survey online, over email, over the phone or in person.

Open-Ended Surveys and Questionnaires

opposite to closed-ended are open-ended surveys and questionnaires. The main difference between the two is the fact that closed-ended surveys offer ~~to~~ predefined answer options - the respondent must choose from, whereas open-ended surveys allow the respondents much more freedom and flexibility when providing their answers.

When creating an open-ended survey, keep in mind the length of our survey and the number and complexity of questions. We need to carefully determine the optimal number of questions, as answering open-ended questions can be time consuming and demanding, and we do not overwhelm our ~~top~~ respondents. ~~comp~~ Compared to closed-ended surveys, one of the quantitative data collection methods, the findings of open-ended surveys are more difficult to compile and analyse due to the fact that there are no uniform answer ~~to~~ options to choose from.

Face-to-Face Interviews

Face-to-face interviews are one of the most common types of data collection methods. Here the interviewer collects data directly from the interviewee. Due to it being personal approach, this data collection technique is perfect when we need to gather highly-personalized data.

Depending on the specific needs, the interview can be informal, unstructured, conversational,

even spontaneous (as if we are talking to our friend) — in which case it is more difficult and time-consuming to process the obtained data — or it can be semi-structured and standardized to a certain extent.

4. Focus groups:

The Focus groups data collection method is essentially an interview method, but instead of being done face-to-face, here we have a group discussion.

Whenever the survenues of face-to-face interviews are limited (whether in terms of people, money or time) or we need to recreate a particular social situation in order to gather data on people's attitudes and behaviours, focus groups can come in very handy.

Ideally, a focus groups should have 3-10 people, plus a moderator. Of course, on departing on the research goal and the data obtained is to be used for, there should be some common denominators for all the members of the focus group.

For example, if we are doing a study on the rehabilitation of teenage female drug users, all the members of our focus group have to be girls recovering from drug addiction. Other parameters, such as age, education, employment, marital status do not have to similar importance.

5. Direct Observation

Direct observation is one of the most passive qualitative data collection methods. Here, the data researcher takes a participatory stance, observing the setting in which the subjects of their observations are while taking down notes, video/audio recordings, photos and so on.

But we must also remember that due to its participatory nature, direct observation can lead to bias in research, as the participatory may influence the attitudes and opinions of the researcher, making

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it challenging for them to remain objective. In addition to ~~that~~ the fact the researcher is a participant too can ~~afford~~ affect the naturalness of the actions and behaviours of ~~the~~ respondents who know they are being observed.

Conclusion

We have discussed ~~of~~ different data collection methods that can help us to gather all the quantitative and qualitative data we need. Here what we must remember is that the selection of the methods/techniques depends on the research problem (topic). Research may use one or more than one technique for data collection. And all the methods and techniques have both ~~and~~ advantages and disadvantages of data collection.