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**ASSIGNMENT QUESTIONS**

1. Qualitative data collection methods with relevant examples
2. Quantitative data collection methods with relevant examples

**ASSIGNMENT ANSWERS**

**QUESTION 1**

[**Qualitative Research: Definition**](https://www.questionpro.com/blog/qualitative-research-methods/)

Qualitative research is defined as a [market research method](https://www.questionpro.com/blog/what-is-market-research/) that focuses on obtaining data through open-ended and conversational communication. This method is not only about “what” people think but also “why” they think so. Therefore, the qualitative research methods allow for in-depth and further probing and questioning of respondents based on their responses, where the interviewer/researcher also tries to understand their motivation and feelings. Understanding how your audience takes decision can help derive conclusion in market research.

[**Qualitative Research Methods with Examples**](https://www.questionpro.com/blog/qualitative-research-methods/)

Qualitative research methods are designed in a manner that they help reveal the behavior and perception of a target [audience](https://www.questionpro.com/audience/) with reference to a particular topic. There are different types of qualitative research methods like an in-depth interview, focus groups, ethnographic research, content analysis, case study research that are usually used.

The following are the qualitative research methods that are frequently used:

**1. One-on-One Interview:** Conducting in-depth interviews is one of the most common qualitative research methods. It is a personal interview that is carried out with one respondent at a time. This is purely a conversational method and invites opportunities to get details in depth from the respondent.

 One of the advantages of this method provides a great opportunity to gather precise data about what people believe and what their motivations are. If the researcher is well experienced asking the right questions can help him/her collect meaningful data. If they should need more information the researchers should ask such follow up questions that will help them collect more information.

**2. Focus groups:** A [focus group](https://www.questionpro.com/blog/focus-group/) is also one of the commonly used qualitative research methods, used in [data collection](https://www.questionpro.com/images/Online-Research-Handbook.pdf). A focus group usually includes a limited number of respondents (6-10) from within your target market.

The main aim of the focus group is to find answers to the why what and how questions. One advantage of focus groups is, you don’t necessarily need to interact with the group in person. Nowadays focus groups can be sent an [online survey](https://www.questionpro.com/online-surveys.html) on various devices and responses can be collected at the click of a button. Focus groups are an expensive method as compared to the other qualitative research methods. Typically they are used to explain complex processes. This method is very useful when it comes to market research on [new products and testing new concepts](https://www.questionpro.com/survey-templates/concept-evaluation-and-pricing-study/).

**3. Ethnographic research:** [Ethnographic research](https://www.questionpro.com/blog/5-easy-ways-to-bring-ethnography-into-your-market-research/) is the most in-depth observational method that studies people in their naturally occurring environment. This method requires the researchers to adapt to the target audiences’ environments which could be anywhere from an organization to a city or any remote location. Here geographical constraints can be an issue while collecting data.

This research design aims to understand the cultures, challenges, motivations, and settings that occur. Instead of relying on interviews and discussions, you experience the natural settings first hand. This type of research method can last from a few days to a few years, as it involves in-depth observation and collecting data on those grounds. It’s a challenging and a time-consuming method and solely depends on the expertise of the researcher to be able to analyze, observe and infer the data.

**4. Case study research:** The case study method has evolved over the past few years and developed as into a valuable qualitative research method. As the name suggests it is used for explaining an organization or an entity. It is one of the simplest ways of conducting research as it involves a deep dive and thorough understanding of the data collection methods and inferring the data.

**5. Record keeping:** This method makes use of the already existing reliable documents and similar sources of information as the data source. This data can be used in a new research. This is similar to going to a library. There one can go over books and other reference material to collect relevant data that can likely be used in the research.

**6. Process of observation:** [Qualitative Observation](https://www.questionpro.com/blog/qualitative-observation/) is a process of research that uses subjective methodologies to gather systematic information or data. Since, the focus on qualitative observation is the research process of using subjective methodologies to gather information or data. The qualitative observation is primarily used to equate quality differences.

Qualitative observation deals with the 5 major sensory organs and their functioning – sight, smell, touch, taste, and hearing. This doesn’t involve measurements or numbers but instead characteristics.

**QUESTION 2**

[**Quantitative Research Definition:**](https://www.questionpro.com/blog/quantitative-research/)

Quantitative research is defined as a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques. Quantitative research collects information from existing and potential customers using [sampling methods](https://www.questionpro.com/blog/types-of-sampling-for-social-research/) and sending out [online surveys](https://www.questionpro.com/online-surveys.html), [online polls](https://www.questionpro.com/online-poll.html), [questionnaires](https://www.questionpro.com/blog/what-is-a-questionnaire/), etc., the results of which can be depicted in the form of numerical. Quantitative research templates are objective, elaborate, and many times, even investigational. The results achieved from this research method are logical, statistical, and unbiased.

[**Quantitative Research Methods: Types with Examples**](https://www.questionpro.com/blog/quantitative-research/)

As mentioned above, quantitative research is data-oriented. There are two methods to conduct quantitative research. They are:

[**Primary Quantitative Research Methods**](https://www.questionpro.com/blog/quantitative-research/)

There are four different types of quantitative research methods:

Primary quantitative research is the most widely used method of conducting [market research](https://www.questionpro.com/blog/what-is-market-research/). The distinct feature of [primary research](https://www.questionpro.com/blog/primary-research/) is that the researcher focuses on collecting data directly rather than depending on data collected from previously done research. Primary quantitative research can be broken down into three further distinctive tracks, as well as the process flow. They are:

[**A. Techniques and Types of Studies**](https://www.questionpro.com/blog/quantitative-research/)

There are multiple types of primary quantitative research. They can be distinguished into the four following distinctive methods, which are:

1. **Survey Research:**

[Survey Research](https://www.questionpro.com/tour/survey-research.html) is the most fundamental tool for all quantitative research methodologies and studies. Surveys used to ask questions to a sample of respondents, using various types such as [online polls](https://www.questionpro.com/online-poll.html), online [surveys](https://www.questionpro.com/blog/surveys/), paper [questionnaires](https://www.questionpro.com/blog/what-is-a-questionnaire/), web-intercept surveys, etc. Every small and big organization intends to understand what their customers think about their products and services, how well are new features faring in the market and other such details.

By conducting [survey research](https://www.questionpro.com/article/survey-research.html), an organization can ask multiple [survey questions](https://www.questionpro.com/article/survey-question-answer-type.html), collect data from a pool of customers, and analyze this collected data to produce numerical results. It is the first step towards collecting data for any research.

Learn More: [300+ Sample Survey Research Templates](https://www.questionpro.com/survey-templates/)

This type of research can be conducted with a specific target audience group and also can be conducted across multiple groups along with comparative analysis. A prerequisite for this type of research is that the [sample of respondents](https://www.questionpro.com/audience/) must have randomly selected members. This way, a researcher can easily maintain the accuracy of the obtained results as a huge variety of respondents will be addressed using random selection. Traditionally, survey research was conducted face-to-face or via phone calls but with the progress made by online mediums such as email or social media, survey research has spread to online mediums as well.

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There are two types of surveys, either of which can be chosen based on the time in-hand and the kind of data required:

**Cross-sectional surveys:** [Cross-sectional surveys](https://www.questionpro.com/blog/cross-sectional-study/) are observational surveys conducted in situations where the researcher intends to [collect data](https://www.questionpro.com/blog/data-collection/) from a [sample](https://www.questionpro.com/blog/types-of-sampling-for-social-research/) of the target population at a given point in time. Researchers can evaluate various variables at a particular time. Data gathered using this type of survey is from people who depict similarity in all variables except the variables which is considered for research. Throughout the survey, this one variable will stay constant.

* Cross-sectional surveys are popular with retail, SMEs, healthcare industries. Information is garnered without modifying any parameters in the variable ecosystem.
* Using cross-sectional survey research method, multiple samples can be analyzed and compared.
* Multiple variables can be evaluated using this type of survey research.
* The only disadvantage of cross-sectional surveys is that the cause-effect relationship of variables cannot be established as it usually evaluates variables at a particular time and not across a continuous time frame.

**Longitudinal surveys:** [Longitudinal surveys](https://www.questionpro.com/blog/longitudinal-study/) are also observational surveys but, unlike cross-sectional surveys, longitudinal surveys are conducted across various time durations to observe a change in respondent behavior and thought-processes. This time can be days, months, years, or even decades. For instance, a researcher planning to analyze the change in buying habits of teenagers over 5 years will conduct longitudinal surveys.

* In cross-sectional surveys, the same variables were evaluated at a given point in time, and in longitudinal surveys, different variables can be analyzed at different intervals of time.
* Longitudinal surveys are extensively used in the field of medicine and applied sciences. Apart from these two fields, they are also used to observe a change in the market trend, analyze customer satisfaction, or gain [feedback on products/services](https://www.questionpro.com/survey-templates/product-surveys/).
* In situations where the sequence of events is highly essential, longitudinal surveys are used.
* Researchers say that when there are [research](https://www.questionpro.com/blog/what-is-research/) subjects that need to be thoroughly inspected before concluding, they rely on longitudinal surveys.
1. **Correlational Research:**

A comparison between two entities is invariable. [Correlation research](https://www.questionpro.com/blog/correlational-research/) is conducted to establish a relationship between two closely-knit entities and how one impacts the other and what are the changes that are eventually observed. This research method is carried out to give value to naturally occurring relationships, and a minimum of two different groups are required to conduct this quantitative research method successfully. Without assuming various aspects, a relationship between two groups or entities must be established.

Example of Correlational Research Questions:

* + The relationship between stress and depression.
	+ The equation between fame and money.
	+ The relation between activities in a third-grade class and its students.
1. **Causal-Comparative Research:**

This research method mainly depends on the factor of comparison. Also called the quasi-experimental research, this quantitative research method is used by researchers to conclude cause-effect equation between two or more variables, where one variable is dependent on the other independent variable. The independent variable is established but not manipulated, and its impact on the dependent variable is observed. These variables or groups must be formed as they exist in the natural set up. As the dependent and independent variables will always exist in a group, it is advised that the conclusions are carefully established by keeping all the factors in mind. Example of Causal-Comparative Research Questions:

* The impact of drugs on a teenager.
* The effect of good education on a freshman.
* The effect of substantial food provision in the villages of Africa.
1. **Experimental Research:** Also known as true experimentation, this research method is reliant on a theory. [Experimental research](https://www.questionpro.com/blog/experimental-research/), as the name suggests, is usually based on one or more theories. This theory has not been proven in the past and is merely a supposition. In experimental research, an analysis is done around proving or disproving the statement. This research method is used in natural sciences.

There can be multiple theories in experimental research. A theory is a statement that can be verified or refuted.

[**B. Data Collection Methodologies**](https://www.questionpro.com/blog/quantitative-research/)

The second major step in primary quantitative research is data collection. Data collection can be divided into sampling methods and data collection with the use of surveys and polls.

**Step 1: Sampling Methods**

There are two main sampling methods for quantitative research: [Probability](https://www.questionpro.com/blog/probability-sampling/) and [Non-probability sampling](https://www.questionpro.com/blog/non-probability-sampling/).

**Probability sampling:** A theory of probability is used to filter individuals from a population and create samples in probability sampling. Participants of a sample are chosen random selection processes. Each member of the target [audience](https://www.questionpro.com/audience/) has an equal opportunity to be selected in the sample.

There are four main types of probability sampling-

* **Simple random sampling:** As the name indicates, [simple random sampling](https://www.questionpro.com/blog/simple-random-sampling/) is nothing but a random selection of elements for a sample. This sampling technique is implemented where the target population is considerably large.
* **Stratified random sampling:** In the [stratified random sampling](https://www.questionpro.com/blog/stratified-random-sampling/) method, a large population is divided into groups (strata), and members of a sample are chosen randomly from these strata. The various segregated strata should ideally not overlap one another.
* **Cluster sampling:** [Cluster sampling](https://www.questionpro.com/blog/cluster-sampling/) is a probability sampling method using which the main segment is divided into clusters, usually using [geographic](https://www.questionpro.com/blog/geographic-segmentation/) and [demographic segmentation](https://www.questionpro.com/blog/demographic-segmentation/) parameters.
* **Systematic sampling:** [Systematic sampling](https://www.questionpro.com/blog/systematic-sampling/) is a technique where the starting point of the sample is chosen randomly, and all the other elements are chosen using a fixed interval. This interval is calculated by dividing the population size by the target sample size.

**Non-probability sampling:** Non-probability sampling is where the researcher’s knowledge and experience are used to create samples. Because of the involvement of the researcher, not all the members of a target population have an equal probability of being selected to be a part of a sample.

There are five non-probability sampling models:

* **Convenience Sampling:** In [convenience sampling](https://www.questionpro.com/blog/convenience-sampling/), elements of a sample are chosen only due to one prime reason: their proximity to the researcher. These samples are quick and easy to implement as there is no other parameter of selection involved.
* **Consecutive Sampling:** [Consecutive sampling](https://www.questionpro.com/blog/consecutive-sampling/) is quite similar to convenience sampling, except for the fact that researchers can chose a single element or a group of samples and conduct research consecutively over a significant period and then perform the same process with other samples.
* **Quota Sampling:** Using [quota sampling,](https://www.questionpro.com/blog/quota-sampling/) researchers can select elements using their knowledge of target traits and personalities to form strata. Members of various strata can then be chosen to be a part of the sample as per the researcher’s understanding.
* **Snowball Sampling:** [Snowball sampling](https://www.questionpro.com/blog/snowball-sampling/) is conducted with target audiences, which are difficult to contact and get information. It is popular in cases where the target audience for research is rare to put together.
* **Judgmental Sampling:** [Judgmental sampling](https://www.questionpro.com/blog/judgmental-sampling/) is a non-probability sampling method where samples are created only based on the researcher’s experience and skill.

**Step 2: Using Surveys & Polls**

Once the sample is determined, then either surveys or polls can be distributed to collect the data for quantitative research.

* **Using Surveys for Primary Quantitative Research**

A [Survey](https://www.questionpro.com/blog/types-of-survey/) is defined as a research method used for [collecting data](https://www.questionpro.com/blog/data-collection/) from a pre-defined group of respondents to gain information and insights on various topics of interest. The ease of survey distribution and the wide number of people it can be reached depending on the research time and research objective make it one of the most important aspects of conducting quantitative research.

**Fundamental Levels of Measurement – Nominal, Ordinal, Interval and Ratio Scales**

There are four measurement scales that are fundamental to creating a [multiple-choice question](https://www.questionpro.com/article/multiple-choice-questions.html) in a survey. They are [nominal, ordinal, interval, and ratio](https://www.questionpro.com/blog/nominal-ordinal-interval-ratio/) measurement scales without the fundamentals of which, no multiple-choice questions can be created. Hence, it is crucial to understand these levels of measurement to be able to develop a robust survey.

**Use of Different Question Types**

To conduct quantitative research, [close-ended questions](https://www.questionpro.com/close-ended-questions.html) have to be used in a survey. They can be a mix of multiple [question types](https://www.questionpro.com/article/types-of-questions-question-types.html) including [multiple-choice questions](https://www.questionpro.com/article/multiple-choice-questions.html) like [semantic differential scale questions](https://www.questionpro.com/semantic-differential-scale.html), [rating scale questions](https://www.questionpro.com/blog/rating-scale/), etc.

**Survey Distribution and Survey Data Collection**

In the above, we have seen the process of building a survey along with the [survey design](https://www.questionpro.com/features/survey-design/) to conduct primary quantitative research. Survey distribution to collect data is the other important aspect of the survey process. There are different ways of [survey distribution](https://www.questionpro.com/features/distributed-via-QRcodes.html). Some of the most commonly used methods are:

* **Email:** Sending a survey via email is the most widely used and most effective methods of survey distribution. The response rate is high in this method because the respondents are aware of your brand. You can use the [QuestionPro email management](https://www.questionpro.com/) feature to send out and collect survey responses.
* **Buy respondents:** Another effective way to distribute a survey and conduct primary quantitative research is to use a [sample](https://www.questionpro.com/audience/). Since the respondents are knowledgeable and are on the panel by their own will, responses are much higher.
* **Embed survey in a website:** [Embedding a survey](https://www.questionpro.com/) in a website increases a high number of responses as the respondent is already in close proximity to the brand when the survey pops up.
* **Social distribution:** Using [social media to distribute the survey](https://www.questionpro.com/features/social-network.html) aids in collecting higher number of responses from the people that are aware of the brand.
* **QR code:** QuestionPro QR codes store the URL for the survey. You can [print/publish this code](https://www.questionpro.com/blog/lets-code-in-qr/) in magazines, on signs, business cards, or on just about any object/medium.
* **SMS survey:** A quick and time-effective way of conducting a survey to collect a high number of responses is the [SMS survey](https://www.questionpro.com/blog/sms-survey-software-tools-india/).
* **QuestionPro app:** The [QuestionPro App](https://www.questionpro.com/mobile/) allows to circulate surveys quickly, and the responses can be collected both online and [offline](https://www.questionpro.com/mobile/offline.html).
* **API integration:** You can use the [API integration](https://www.questionpro.com/api/) of the QuestionPro platform for potential respondents to take your survey.

**Survey Example**

An example of a survey is a [short customer satisfaction (CSAT) survey template](https://www.questionpro.com/survey-templates/short-customer-satisfation/) that can quickly be built and deployed to collect feedback about what the customer thinks about a brand and how satisfied and referenceable is the brand.

You can also opt to use from any of over [300+ free survey templates](https://www.questionpro.com/survey-templates/) from the QuestionPro survey template and questionnaire repository to conduct your quantitative research.

* **Using Polls for Primary Quantitative Research**

Polls are a method to collect feedback with the use of [close-ended questions](https://www.questionpro.com/close-ended-questions.html) from a [sample](https://www.questionpro.com/audience/). The most commonly used types of polls are [election polls](https://www.questionpro.com/election-polls.html) and [exit polls](https://www.questionpro.com/blog/exit-polls/). Both of these are used to collect data from a large sample size but using basic [question types](https://www.questionpro.com/article/types-of-questions-question-types.html) like a [multiple-choice question](https://www.questionpro.com/article/multiple-choice-questions.html).

Techniques: The third aspect of primary quantitative research is [data analysis](https://www.questionpro.com/blog/data-analysis-101-metric/). After the collection of raw data, there has to be an analysis of this data to derive statistical inferences from this [research](https://www.questionpro.com/blog/what-is-research/). It is important to relate the results to the objective of research and establish the statistical relevance of results.

It is important to consider aspects of research which were not considered for the data collection process and report the difference between what was planned vs. what was actually executed. It is then required to select precise statistical analysis method such as [SWOT](https://www.questionpro.com/blog/try-this-customer-focused-swot-analysis-at-your-next-marketing-plan-session/), [Conjoint](https://www.questionpro.com/conjoint-analysis.html), [Cross-tabulation](https://www.questionpro.com/cross-tabulation.html), etc. to analyze the [quantitative data](https://www.questionpro.com/blog/quantitative-data/).

[**Secondary Quantitative Research Methods**](https://www.questionpro.com/blog/quantitative-research/)

Secondary quantitative research or desk research is a [research](https://www.questionpro.com/blog/what-is-research/) method that involves using already existing data or [secondary data](https://www.questionpro.com/blog/secondary-research/). Existing data is summarized and collated to increase the overall effectiveness of research.This research method involves the collection of [quantitative data](https://www.questionpro.com/blog/quantitative-data/) from existing data sources like the internet, government resources, libraries, research reports, etc. Secondary quantitative research helps to validate the data that is collected from primary quantitative research as well as aid in strengthening or proving or disproving previously collected data.

Following are five popularly used secondary quantitative research methods:

1. **Data available on the internet:** With the high penetration of internet and mobile devices, it has become increasingly easy to conduct quantitative research using the internet. Information about most research topics is available online, and this aids in boosting the validity of primary [quantitative data](https://www.questionpro.com/blog/quantitative-data/) as well as proving the relevance on previously collected data.
2. **Government and non-government sources:** Secondary quantitative research can also be conducted with the help of government and non-government sources that deal with [market research](https://www.questionpro.com/blog/what-is-market-research/) reports. This data is highly reliable and in-depth and hence, can be used to increase the validity of quantitative research.
3. **Public libraries:** Now a sparingly used method of conducting quantitative research, it is still a reliable source of information though. Public libraries have copies of important research that were conducted earlier. They are a storehouse of valuable information and documents from which information can be extracted.
4. **Educational institutions:** Educational institutions conduct in-depth [research](https://www.questionpro.com/blog/what-is-research/) on multiple topics, and hence, the reports that they publish are an important source of validation in quantitative research.
5. **Commercial information sources:** Local newspapers, journals, magazines, radio, and TV stations are a great source to obtain data for secondary quantitative research. These commercial information sources have in-depth, first-hand information on economic developments, political agenda, market research, demographic segmentation, and similar subjects.