**ASSIGNMENT**

COURSE TITLE: RESEARCH METHODS

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**ANSWER**

**QUANTITATIVE DATA COLLECTION METHODS:**

Definition of Quantitative data:

These are data which deal with quantities, values or numbers, making them measurable. They are usually expressed in numerical form, such as length, size amount, price and duration. It uses statistics to generate and analyze this type of data add credence or credibility to it, so that quantitative data is overall seen as more reliable and objective.

DATA COLLECTION METHODS: Data can readily be quantified and generated into numerical form, which will then be converted and processed into useful information mathematically. Results are often in the form of statistics that is meaningful and therefore useful. Unlike qualitative methods, these quantitative techniques usually make use of larger sample sizes because its measurable in nature this makes it possible and easier. The following are examples of quantitative data collection methods.

* **Surveys/ questionnaires** : Surveys or questionnaires are created using online survey software . The surveys are designed in a manner to legitimize the behavior and trust of the respondents. Checklists and rating scales are often used, it helps in simplifying and quantifying the attitude or behavior of the respondents .

There are two significant types of survey questionnaires used to collect online data for quantitative market research.

* **Web- Based questionnaire**: In a web-based questionnaire, they receive an email containing the survey link, clicking on which takes the respondent to a secure online survey tool from where he/she can take the survey or fill in the survey questionnaire. The benefit is flexibility; respondents are free to take the survey in their free time using their desktop, laptop, tablet, or mobile
* **Mail questionnaire:** In a mail questionnaire, the survey is mailed out to a host of the sample population , enabling the researcher to connect with a wide range of audiences, The mail questionnaire typically consists of a packet containing a cover sheet that introduces the audience about the type of research and reason why it is being conducted along with a prepaid return to collect data online.
* **Interviews:** Personal one-on-one interviews may also be used for gathering quantitative data. In collecting quantitative data, the interview is more structured than when gathering qualitative data, comprised of a prepared set of standard questions.These interviews can take the following forms:
* **Face-to-face interviews:** much like when conducting interviews to gather qualitative data, this can also yield quantitative data when standard questions are asked. It allows the researcher to make clarifications on any answer given by the interviewee.
* **Telephone/ online, web- based interviews:** Conducting interviews over the phone is no longer a new concept. Rapidly rising to take place of telephone interviews is the new video interview via internet connection and web-based applications, such as skype. The net for data collection may be cast wider, since there is no need to travel through distances to get the data.
* **Computer-assisted interviews:** This is the interviewing where, in a face-to-face interview, the data obtained from the interviewee will be entered directly into a database through the use of a computer. The direct input of data saves a lot of time and other resources in converting them into information later on, because the processing will take place immediately after the data has been obtained from the source and entered into the database.
* **Quantitative Observation:**  Data may be collected through systematic observation by counting the number of users present and currently accessing services in a specific area, or the number of services being used within a designated vicinity. When quantitative data is being sought, the approach is naturalistic observation, which mainly involves using the senses and keen observation skills to get data about the “what”, and not really about the “why” and “how”. It is a quite simple way of collecting data, and not as expensive as the other methods
* **Experiments:** This method involve manipulation of an independent variable, while maintaining varying degrees of control over other variables, most likely the dependent ones. Usually, this is employed to obtain data that will be used later on for analysis of relationships and correlations. Quantitative researchers more often make use of experiments to gather data, and types of correlations are:
* **Laboratory experiments:** This is your typical scientific experiment setup, taking place within a confined, closed and controlled environment, with the data collector being able to have strict control over all the variables. This level of control also implies that he can fully and deliberately manipulate the independent variable.
* **Field experiments:** This takes place in a natural environment, ”on field” where, although the data collector may not be in full control of the variables, he is still able to do so up to a certain extent.
* **Natural experiments:** This times , the data collector has no control over the independent variable whatsoever, which means it cannot be manipulated. Therefore, what can only be done is to gather data by letting the independent variable occur naturally, and observe its effects.

**QUALITATIVE DATA COLLECTION METHODS**

Definition of qualitative data:

Qualitative data is descriptive in nature rather than numerical. It is not easily measurable as quantitative data and can be gained through observation or open-ended survey or interview questions. Qualitative research is most likely to provide answers to questions such as “why”? and “how”?. Data obtained using qualitative data collection methods can be used to find new ideas opportunities, and problems, test their value and accuracy .

DATA COLLECTION METHODS: They are exploratory in nature, these methods are mainly concerned at gaining insights and understanding on underlying reasons and motivations, so they tend to dig deeper. This lack of measurability leads to the preference for methods or tools that are largely unstructured or, in some cases, maybe structured but only to a very small, limited extent. The following are examples of data collection:

* **Focus Groups:**  This is basically an interview method, but it is done in a group discussion setting. When the object of the data is behaviors and attitudes, particularly in social situations, and resources for one-on-one interviews are limited, using the focus group approach is highly recommended, the data collector may also get highly detailed and descriptive data by using a focus group.
* **Observation:** The researcher takes a participatory stance, immersing himself in the setting where his respondents are, and generally taking a look at everything, while taking down notes. Apart from taking notes, other documentation methods may be used, such as video and audio recording, photography, and the use of tangible items like mementoes and other tools. Data is more reliable and representative of what is actually happening, since they took place and were observed under normal circumstances.
* **Longitudinal studies:** This is a research method that is performed repeatedly, on the same data sources, over an extended period of time. It is an observational research method that could even cover a span of years and in some cases, even decades. The goal is to find correlations through an empirical or observational study of subjects with a common trait or characteristics. This is the ideal when seeking data meant to establish a variable’s pattern over a period of time, particularly over an extended period of time.
* **Case studies:** In this method, data is gathered by taking a close look and an in-depth analysis of a “case study” or “case studies”, the unit or units of research may be an individual or a group of individuals or an entire organization. It is flexible and versatile, analyzing both simple and complex units and occurrence , even over a long period of time.

**IMPORTANCE OF DATA COLLECTION METHODS**

* Data collection aids in the search for answers and solutions.
* Data collection facilitates and improves decision-making processes, and the quality of the decisions made.
* Data collection improves quality of expected results or output.
* It helps to learn more about clients and customers
* It enables individual to segment audience into different marketing strategies at each of the groups based on their individual needs