##### ***Victoria University of Bangladesh***

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##### Course Title : Marketing Research

##### Course Code: MKT 438

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Ans to the question no.1

Marketing research is the process of defining a marketing problem or opportunity, systematically collecting and analyzing information, and recommending actions to improve and organization's marketing activities. Marketing research is used by executives to aid in the decision-making process. It helps companies understand why customers purchase certain products or brands.

There are four primary scales of measurement: nominal, ordinal, interval, and ratio. Let's explore each of them with appropriate examples:

**1.Nominal Scale:** The nominal scale is the most basic level of measurement and is used for categorical data that can be classified into distinct categories or groups. Data at this level has no inherent order, hierarchy, or meaningful numeric value.

Examples:

Types of soft drinks (e.g., Coke, Pepsi, Sprite)

Colors (e.g., red, blue, green)

Marital status (e.g., single, married, divorced)

**2.Ordinal Scale:** The ordinal scale involves categories with a meaningful order or ranking, but the intervals between the categories are not uniform or consistent. The differences between ranks are not quantifiable.

Example: Customer satisfaction ratings on a scale of 1 to 5, where 1 represents "Very Dissatisfied," 2 represents "Dissatisfied," 3 represents "Neutral," 4 represents "Satisfied," and 5 represents "Very Satisfied."

**3.Interval Scale:** The interval scale has ordered categories with consistent intervals between them, but it lacks a true zero point. This means that ratios and meaningful differences between values cannot be determined.

Example: Temperature measured in degrees Celsius or Fahrenheit. The difference between 20°C and 30°C is the same as between 30°C and 40°C, but a temperature of 0°C does not indicate a complete absence of temperature.

**4.Ratio Scale:** The ratio scale has ordered categories with consistent intervals, a true zero point, and meaningful ratios between values. Ratios and meaningful comparisons can be made.

Example: Sales revenue, age, and number of purchases. For instance, if one product generates twice the revenue as another, it can be accurately stated that the first product has twice the revenue.

Ans to the question no.2

Questionnaire is a systematic, data collection technique consists of a series of questions required to be answered by the respondents to identify their attitude, experience, and behavior towards the subject of research. Here's an overview of the questionnaire design process:

**Specify the Information Needed:** The initial step in questionnaire design is specifying the necessary information from respondents to fulfill the survey's objective, requiring a thorough review of the problem's components, hypothesis, research questions, and required information.

**Specify the type of Interviewing Method:** The next step involves determining the method of reaching respondents. Personal interviews involve face-to-face interaction with a questionnaire, while telephone interviews require answers over the phone. Questionnaires can be sent via mail or post, and should be self-explanatory and complete. Electronic questionnaires are sent directly to respondents' email addresses, requiring online responses.

**Determine the Content of Individual Questions:** After determining the necessary information and interviewing methods, the researcher must decide the content of the question. In some cases, indirect questions may be used to establish respondent involvement and rapport. Neutral questions can be used at the beginning of a questionnaire to ensure the question serves a specific purpose or contributes to the needed information.

**Overcome Respondent’s Inability and Unwillingness to Answer:** The researcher should not assume respondents can provide accurate responses, but should attempt to overcome their inability to answer. Questions should be designed in simple language, and if respondents are not informed about the topic, filter questions can be used to identify potential respondents and ensure they meet the sample requirements.

**Decide on the Question Structure:** The researcher must select the structure of questions for the questionnaire, which can be structured or unstructured. Unstructured questions are open-ended, while structured questions are closed-ended, such as multiple choice, dichotomous, or scale questions.

**Determine the Question Wording:** The researcher must translate the desired question content and structure into easily understandable words for respondents, ensuring that the information received aligns with the intended meaning.

**Determine the Order of Questions:** The researcher must determine the order of question sequences, as opening questions are crucial for establishing rapport and involvement. These should be interesting, non-threatening, and easy. Typically open-ended questions allowing respondents to express their opinions.

**Identify the Form and Layout:** The format, positioning, and spacing of questions significantly impact results, especially for self-administered questionnaires. The layout should be divided into parts, accurately numbered, and clearly defined for each question branch.

**Reproduction of Questionnaire:** The questionnaire's appearance, including the quality of paper used, is crucial for its quality and response quality. Poor-quality paper can make respondents feel unimportant, affecting the quality of responses. It is recommended to reproduce the questionnaire professionally and present it in a booklet format for multiple pages.

**Pretesting:** Pretesting is a method of testing questionnaires on a small sample of respondents to identify and eliminate potential issues. It involves examining all aspects of the questionnaire, including content, structure, wording, sequence, form, layout, instructions, and difficulty, to ensure similarity to the final survey.

Here's a chart differentiating between probability sampling and non-probability sampling:

|  |  |  |
| --- | --- | --- |
| Aspect | Probability Sampling | Non Probability Sampling |
| Meaning | Probability sampling is a sampling technique, in which the subjects of the population get an equal opportunity to be selected as a representative sample. | Nonprobability sampling is a method of sampling wherein, it is not known that which individual from the population will be selected as a sample. |
| Alternately known as | Random sampling. | Non-random sampling. |
| Basis of selection | Randomly. | Arbitrarily. |
| Opportunity of selection | Fixed and known. | Not specified and unknown. |
| Research | Conclusive | Exploratory |
| Result | Unbiased | Biased |
| Method | Objective | Subjective |
| Inferences | Statistical | Analytical |
| Hypothesis | Tested | Generated |
| Examples | Simple Random Sampling, Systematic Sampling, Stratified Sampling, Cluster Sampling | Convenience Sampling, Judgmental Sampling, Snowball Sampling |

It's important to note that the choice between probability and non-probability sampling depends on the research objectives, available resources, and the level of representativeness required for the study.

Ans to the question no.3

**A.**

Cross tabulation, is a statistical technique used to analyze the relationship between two categorical variables. It helps in summarizing and visualizing data, making it useful for market research, surveys, and data analysis. For example, in a survey comparing customer satisfaction (satisfied, neutral, dissatisfied) with product types (A, B, C), a cross-tabulation can reveal if certain product types are more likely to lead to customer satisfaction, aiding in strategic decision-making for product development or marketing.

**B.**

Frequency distribution is a method in marketing research to organize data into categories and display their occurrences. For instance, in a survey about favorite ice cream flavors among 100 respondents, a frequency distribution could show that 30 respondents preferred chocolate, 25 preferred vanilla, 20 preferred strawberry, and 25 preferred other flavors. This helps marketers understand consumer preferences and tailor strategies accordingly.

**C.**

In marketing research, a sample refers to a portion of a larger population that is chosen for analysis. A sampling unit is an individual element or group within the population that is selected for potential inclusion in the sample. The sample size is the number of sampling units included in the sample. For instance, in a survey targeting smartphone users in a city, the sampling unit could be an individual smartphone user, and the sample size might be 500 smartphone users chosen for the study.