

CREATION OF AN EFFECTIVE QUESTIONNAIRE FOR A RESEARCH PAPER

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ABSTRACT

Questionnaires are ubiquitous tools in research, employed across disciplines to gather data efficiently. However, designing effective questionnaires requires a nuanced understanding of various factors, including psychology, linguistics, and survey methodology.

This paper provides a comprehensive review of questionnaire design principles, covering the theoretical foundations, practical considerations, and emerging trends in the field. By examining key elements such as question construction, response options, and survey administration methods, this paper offers insights to researchers seeking to optimize their questionnaire instruments for reliable and valid data collection.

Keywords: Questionnaire, Academic Survey, Questionnaire Design, Research Methodology

1) INTRODUCTION

A questionnaire, as the heart of the survey, is based on a set of questions designed to gather data from respondents. These questions translate the researchers' needs into a form that can be addressed using respondents' answers. A questionnaire, being the main and most dominant method of collecting primary and quantitative data, standardizes the data collection process, making it comparable. This ensures a faster and more accurate data collection process and facilitates data processing as well (Krosnick, 2018; Malhotra, 2006).

Conducting surveys using questionnaires is one of the most common methods across various fields such as academic research, business organizations, and public institutions. Although it may seem a simple process initially, responses can be highly variable and sometimes unpredictable, leading to numerous challenges. Therefore, the appropriate design of a questionnaire significantly impacts both the quality and quantity of the data collected, thereby influencing the survey results. A poorly designed questionnaire can introduce biases and errors, while a well-designed one can motivate respondents to provide accurate and adequate answers.

Moreover, a standardized format of questions is essential for conducting interviews, as it is crucial to ask questions uniformly to all respondents. Variations in how questions are asked can overshadow the results (Brace, 2018). Consequently, it is recommended to follow a systematic process when designing questionnaires to achieve the best possible survey outcomes. However, it should be noted that achieving perfect results is impossible. The steps required for preparing effective questionnaires are outlined in the following sections (Agrawal, 2010).

2) TYPES OF QUESTIONNAIRES

There are two commonly used types of questionnaires: **structured and unstructured**, along with a combination of these types known as **quasi-structured questionnaires**. **Structured questionnaires** employ a specified and clear pattern using sequenced questions that are pre-coded and used in most data collection processes. They offer many advantages, such as ease of administration and fewer discrepancies. Additionally, answers tend to be more consistent, facilitating easier data management.

In contrast, unstructured questionnaires utilize open-ended and opinion-type questions, making them more suitable for focus group interviews. The vast range of possible answers in unstructured questionnaires makes it challenging to pre-code responses.

A quasi-structured questionnaire combines elements of both structured and unstructured types. It primarily uses structured questions but includes some unstructured questions to capture responses that are difficult to enumerate (Acharya, 2010). These two main types will be defined in more detail when the steps of designing a questionnaire are reviewed.

3) STEPS OF QUESTIONNAIRE DESIGN

After understanding the fundamentals of questionnaires, the main step is designing a questionnaire. Designing a questionnaire involves several key steps to ensure that the data collected is reliable, valid, and useful for our research objectives. Here is a comprehensive guide to designing an effective questionnaire based on feedback.

Designing of a questionnaire by following these steps:

a) Define the Objectives:

What we want to achieve with the questionnaire. And what specific information are we looking to gather? In research, both different research questions and hypotheses need to be addressed as the aims of the study. Hypotheses are developed based on the reasons or solutions to the problems using various assumptions. Research questions, however, are more applicable in practical research aimed at addressing problems or uncertainties without necessarily relying on assumptions (Taherdoost, 2021). Therefore, research questions focus on specific issues rather than a broad range of possibilities. Table I illustrates the differences between research questions and hypotheses using simple examples.

b) Review Existing Literature

i) **Research Background Information:** Look at existing studies or questionnaires that the specific information are we looking to gather in our field.

These elements, including research questions, hypotheses, and the nature of the study, are fundamental to a research project as they help identify what information needs to be collected during surveys or other data collection methods. Recognizing the required information is a critical part of designing a suitable questionnaire because the information needed directly influences the design of the questions (Agrawal, 2010).

Table 1:

Hypothesis And Research Questions Type	Example	Information Needed
Hypothesis	Do Customers Care About the Quality of Services More Than the Prices?	Customers' Perceptions of The Quality of Services and Prices.
Research Question	What Do the Customers Care About?	The Relative Importance Of Goods And Services

c) Choose the Mode of Administration

i) After identifying the required data for the study's purpose, it's essential to determine which type of survey is most suitable for the work. For this purpose, two general types of surveys should be considered.

Questionnaire can be either distributed

ii) Self or personally

iii) Through mail/ by e-mail/Internet.

It seems like we have covered the key considerations for choosing between self-administered and interviewer-based surveys quite comprehensively. Each method has its advantages and disadvantages, and it's essential to weigh these factors carefully when designing a survey.

Self-administered surveys offer cost savings, ease of implementation, and increased confidentiality for respondents. They're particularly suitable for literate populations and when time constraints are a concern. On the other hand, interviewer-based surveys, while more expensive and time-consuming, can be beneficial when dealing with respondents who require clarification on questions or when specific objectives such as using visuals or audios are necessary.

In practice, researchers often opt for a combination of methods to maximize the benefits while minimizing drawbacks. For example, using online surveys for a broad reach and cost-effectiveness, supplemented with phone interviews for more in-depth responses from certain demographic groups.

Considering these factors ensures that the chosen survey method aligns with the research objectives and effectively captures the necessary data from the target population.

d) Draft the Questions

i) Type of Questions

When determining the types of questions to include in a questionnaire to measure constructs like satisfaction with goods or customer reactions to quality, it's essential to select question formats that effectively capture the desired information. Here are some common types of questions we might consider: Questions are commonly divided into two broad categories: close-ended and open-ended questions. Researchers need to decide about using through which kind of these terms at first steps while designing the questionnaire. Open-ended questions provide the opportunity of using their own words for the respondents; however, using close-ended questions limits the possibilities of true answers by using a set of specific answers. Nevertheless, the majority of questions are selected as the close-ended categories (Taherdoost, 2021). Sometimes it is better to use open-ended questions to gather the opinion of the respondents in the best possible way.

Open-ended questions: These allow respondents to provide free-form responses and are valuable for collecting qualitative insights. Examples include:

"What aspects of the product do we like the most?"

"Please share any suggestions for improving the quality of our goods."

Closed-ended questions: These provide predefined response options and are useful for gathering quantitative data. Examples include:

Rating scales (e.g., "On a scale of 1 to 5, how satisfied are we with the quality of the product?")

Multiple-choice questions (e.g., "Which of the following factors influenced our decision to purchase this product?")

Open-ended and close-ended questions were reviewed above. However, another point that needs to be considered is the scaling and rating format of questions.

Rating formats are categorized into three main types which are discussed in the following:

A. Matrix questions: These present a grid of related questions with the same set of response options. They're useful for assessing multiple aspects of a construct in a structured format. Example: "Please rate the following aspects of our goods on a scale from 'Strongly Disagree' to 'Strongly Agree': Quality, Price, Durability, and Appearance."

B. Ranking questions: These ask respondents to rank items in order of preference or importance. Example: "Please rank the following factors in order of importance when considering a purchase: price, quality, brand reputation."

C. Scaling Type of Questions:

We have provided a comprehensive overview of different scaling types used in surveys, along with considerations for labeling the points and determining the number of points on scales. Let's summarize and expand on the key points:

Thurstone Scaling: Also known as equal-appearing scaling, this method involves grouping and arranging respondents' answers. It can be used to rank items based on different criteria, such as income levels. The number of points used in Thurstone scaling can vary, but commonly it is seen as an 11-point scale.

Guttman Scaling: This is a cumulative scaling method where each alternative possesses the same idea or inherent attribute as the previous one. Subsequent responses are based on previous responses, and agreement with one implies agreement with previous ones.

Likert Scaling: Likert scaling arranges opinions on a range from extremely positive to extremely negative. Response options typically include phrases like "Fully Agree," "Somewhat Agree," "Neither Agree nor Disagree," "Somewhat Disagree," and "Fully Disagree." The number of points in Likert scales is commonly 5 or 7, with 7 points often providing greater differentiation.

When labeling the points on scales, researchers can choose between unipolar or bipolar scales:

Unipolar Scales: Use numbers as options, such as a scale from 0 to 20.

Bipolar Scales: Use a range of numbers with positive and negative values, such as a scale from -5 to +5.

The choice of the number of points on a scale can vary depending on the study's objectives and the content of the questions:

Likert scales commonly use 5 or 7 points, but other researchers may use different numbers.

Generally, 5 to 7-point scales are preferred as they are easily rescaled for comparison. Seven-point scales may provide better differentiation of responses.

The appropriate number of points can also depend on whether questions involve absolute judgments or abstract judgments. For absolute judgments, fewer points (e.g., 5-point scale) may be suitable, while abstract judgments may benefit from longer scales (e.g., 7 to 9 points).

By considering these factors, researchers can design scales that effectively capture respondents' opinions and attitudes, providing valuable insights for analysis.

Semantic differential scales: These measure the attitudes of respondents towards a particular subject by using pairs of opposite adjectives anchored at each end of a scale. For example: indicate how we perceive the quality of our goods by selecting a point on the scale between 'Poor' and 'Excellent'."

ii) Types of Responses of Question

We have sketched out different contemplations with respect to the sorts of reactions in studies, counting yes/no alternatives vs. multiple-point scales, single vs. different responses/questions, the consideration of unbiased choices, DK ("do not know") choices, and demographics-based/filter questions. Let's dig into each of these focuses:

- (1) Yes/No Alternatives or Multiple-Point Scale: Yes/no alternatives are reasonable for gathering authoritative answers, such as truthful questions. Multiple-point scales are ideal for evaluating conclusions, demeanors, and eagerly, giving a broader extend of reactions.
- (2) Single or Numerous Reactions and Single or Numerous Questions: Advertising the choice to choose numerous reactions can be advantageous when respondents have changed inclinations or when investigating different angles of a point. Asking numerous questions in numerous ways can improve unwavering quality, check consistency, and reveal different measurements of a point.
- (3) Considering a Impartial Choice: Counting unbiased choices (e.g., "unbiased," "might," "might not") permits respondents to demonstrate instability or need of solid supposition, supporting in exact information collection and sparing respondents' time.
- (4) DK ("don't know") Choices and Channel Questions: Giving DK choices obliges respondents who need information on certain points, improving study completion rates and information precision. Channel questions offer assistance prohibit respondents who do not meet particular criteria or need important information, guaranteeing that reactions are significant and significant.
- (5) Demographics-Based and Channel Questions: Utilizing ranges rather than exact values for demographics-based questions can increment respondents' consolation levels and inspiration to take part. Channel questions based on socioeconomics or other criteria guarantee that respondents as it were reply questions pertinent to them, diminishing overview weariness and progressing information quality.

Joining these contemplations into study plan ensures that respondents can give exact, important, and comfortable reactions, driving to high-quality information for investigation.

iii) Points of Wording the Questions?

Our list provides valuable guidance on wording survey questions effectively to ensure clarity, minimize respondent burden, and avoid bias. Let's summarize and expand on these points:

- (1) Keep questions concise: Lengthy questions can be burdensome for respondents and may lead to fatigue or confusion. Short, clear questions are easier to understand and answer.
- (2) Eliminate ambiguity: Ambiguous options can lead to varied interpretations among respondents, compromising the reliability and validity of survey data. Clearly defined options help ensure consistent understanding and responses.
- (3) Define questions clearly: Clear and detailed questions aid respondents in understanding the topic and provide context for their answers, reducing confusion and enhancing data quality.

- (4) Avoid bias: Biased questions or those based on assumptions can influence respondents' choices, leading to skewed results. Neutral and objective wording helps maintain the integrity of survey responses.
- (5) Simplify language: Technical terms and slang may not be universally understood, so use simple and clear language that is accessible to all respondents.
- (6) Avoid vague quantifiers: Terms like "frequently" or "usually" lack specificity and may lead to inconsistent interpretations. Instead, specify numerical values or time periods for clearer understanding.
- (7) Ensure relevance: Questions should be directly related to the research objectives to gather meaningful data and avoid confusion or frustration among respondents.
- (8) Avoid double negatives or barreled questions: These can confuse respondents and lead to inaccurate responses. Use clear, straightforward language to minimize confusion.

Additional recommendations include:

Use short, one-sentence questions: Shorter questions are easier to process and respond to, reducing respondent burden and improving data quality.

Avoid overly concrete or specific wording: Questions should allow for flexibility in interpretation to capture a range of responses and perspectives.

Focus on current or recent attitudes: Asking about recent experiences or attitudes helps ensure the relevance and accuracy of responses.

Use higher numeric values for agree terms: When using Likert scales or similar rating systems, assigning higher numeric values to agree terms can help reflect the intensity of respondents' agreement.

By following these guidelines, researchers can craft survey questions that effectively capture respondents' perspectives and produce reliable, actionable data for analysis.

e) Organize the Questionnaire:

In this stage, it is time to put the questions in the construct of the questionnaire. In this step, the general construct of the questionnaire includes the introduction and the order of the questions. Thus, the main points to consider in achieving a good construct are discussed in this section.

Organizing the questions in a questionnaire involves structuring both the introduction and the order of the questions themselves. Let's delve into these two aspects:

i) Prepare an Introduction

The introduction should outline the purpose of the study, emphasizing its significance and relevance to the respondents. Assure respondents of the confidentiality of their responses to encourage honest and open feedback. Provide information on the sources of the study and how the data will be used to ensure transparency and build trust. Reinforce key points from any accompanying cover letter, especially in mailed questionnaires, to ensure consistency in messaging (Taylor-Powell & Marshall, 1998).

ii) Optimize the order of Questions:

(1) General types of ordering Questions:

- **Serial order:** Questions are arranged in a sequential order, promoting motivation and aiding the learning process of respondents. Start with less sensitive or difficult questions to ease respondents into the survey, and gradually progress to more complex topics. Place demographic or background questions towards the end.
- **Semantic order:** Questions are grouped based on related topics, facilitating cognitive processing and recall for respondents. This approach ensures coherence and flow in the questionnaire, making it easier for respondents to understand and respond to the questions (Krosnick, 2018).

(2) Types of Information Achieved:

- **Basic Information:** These questions aim to provide fundamental information directly related to the main research subject. They help in establishing a foundation for understanding the core aspects of the topic under investigation.
- **Classification Information:** This category encompasses demographic and socio-economic information about respondents. It includes details such as age, gender, ethnicity, education level, occupation, income, etc. Classification information aids in

segmenting and analyzing findings based on different groups within the respondent population.

- **Identification Information:** These questions gather personal details such as names, telephone numbers, and addresses of respondents. This data is primarily used for identification and verification purposes, ensuring the integrity and authenticity of the surveyed participants. Additionally, it may be utilized for distributing promised incentives or rewards for participation in the research study.

(3) General or Specific Questions:

When structuring the order of questions in a survey or interview, researchers often consider whether to arrange them from general to specific or utilize an inverted format. The funnel approach, which progresses from general to specific questions, is commonly employed to mitigate biases. This method begins with broad inquiries and gradually narrows down to more focused ones, akin to the shape of a funnel. While the funnel approach is widely utilized, alternative sequencing methods can also be appropriate in specific contexts, as discussed further below (Malhotra, 2006).

(4) Points for optimizing the order of questions:

Certainly, here are the refined points for optimizing the order of questions in a questionnaire, based on the combination of categorized types and recommendations from researchers:

- **Start with Easy Questions:** Place straightforward and easy-to-answer questions at the beginning of the questionnaire to ease respondents into the survey process and encourage participation.
- **Group Related Questions:** Organize questions into logical groups or sections, grouping together those that are related or pertain to similar topics. This enhances coherence and aids respondents in understanding the questionnaire's structure.
- **Begin with Opinion Questions:** Initiate the questionnaire with questions about participants' opinions to engage them from the start and encourage thoughtful responses.
- **Sequence by Relevance:** Present questions related to the main topic first as basic information, followed by classification and identification questions respectively. This ensures a focused and coherent progression through the questionnaire.
- **Utilize Funnel Approach:** Arrange questions about the same topic from general to specific, employing a funnel approach. This gradual narrowing down helps to avoid biases and ensures a systematic exploration of the subject matter.
- **Consider Inverted-Funnel Method:** Employ the inverted-funnel method when participants lack a clearly formulated viewpoint about the subject or when there is a lack of reference frame for questions regarding the general subject matter. This method helps to establish context before delving into specific details.
- **Place Sensitive Questions Last:** Position sensitive questions towards the end of the questionnaire to build rapport with respondents before addressing potentially uncomfortable topics. This approach encourages honest and thoughtful responses.
- **Feature Important Questions Early:** Include important and interesting questions at the beginning of the questionnaire to capture respondents' attention and maintain their engagement throughout the survey.
- **Ensure Natural Flow:** Craft questions to ensure a natural flow and logical progression throughout the questionnaire, facilitating respondents' understanding and engagement.

By adhering to these guidelines, researchers can optimize the questionnaire design, enhance respondent experience, and maximize the quality of collected data.

(5) The physical appearance

Certainly! Here are the properties of the physical appearance of a questionnaire as outlined in our provided text:

- **Font of the Content:**
 1. Font size and style significantly impact readability and respondent engagement.

2. Small fonts may encourage respondents in face-to-face interviews but can lead to difficulties in reading and following instructions.
3. Optimal font size recommended by researchers ranges from 10 to 12 points, with larger fonts for key instructions.
4. Using bold, italic, or underline formatting can help emphasize important points and guide respondents' attention.

➤ **Providing Instructions:**

1. Clear instructions for each section of the questionnaire are essential for respondents to understand and complete the survey accurately.
2. Instructions should be tailored to the type of questions (e.g., open-ended, multiple-choice) and presented clearly to avoid errors and misunderstandings.

➤ **Importance of Pre-coding the Answers:**

1. Pre-coding involves assigning numbers to response categories to facilitate data analysis, particularly for close-ended questions.
2. Pre-coded responses are vital when computers are used for data collection and analysis, streamlining the tabulation process.
3. Answer blanks should be placed consistently on the page to facilitate data entry and analysis.

These properties contribute to the overall quality and effectiveness of the questionnaire by ensuring clarity, ease of use, and accuracy in data collection and analysis.

f) **Pre-Test the Questionnaire**

Pre-testing a questionnaire is a critical step in ensuring its quality and effectiveness. Here's a guide on how to **pre-test our questionnaire**:

- i) **Select a Small Sample:** Conduct the pre-test survey with a small number of participants, typically between 15 to 30 respondents. Ensure that these participants are similar to our target group in terms of background, education, interests, and familiarity with the subject matter.
- ii) **Evaluate Different Aspects:** Assess various aspects of the questionnaire during the pre-test, including wording, question flow, question sequence, format, and content.
- iii) **Ensure Understanding:** Determine whether participants can understand the questions clearly. Identify any hard-to-understand questions, including those containing special words or technical phrases.
- iv) **Avoid Offensive Questions:** Check for any offensive questions that may make participants uncomfortable or unwilling to respond. Remove or revise these questions as necessary.
- v) **Assess Completeness:** Verify if participants can provide all the required information for each question. Address any gaps or missing information by refining the questions or adding prompts.
- vi) **Identify Unwillingness to Answer:** Determine if there are any questions that participants are hesitant to answer. Modify or rephrase these questions to encourage responses or provide options for participants to skip.
- vii) **Evaluate Question Placement:** Assess whether the questions flow naturally and are in appropriate locations within the questionnaire. Ensure that questions are organized logically and do not disrupt the survey's flow.
- viii) **Avoid Socially Desirable Responses:** Identify questions that may elicit socially desirable responses, leading to biased or inaccurate data. Adjust wording or response options to minimize this bias.
- ix) **Review Clarity of Instructions:** Evaluate the clarity and comprehensibility of instructions provided for each section of the questionnaire. Ensure that instructions are easy to understand and follow.
- x) **Assess Positive Intentions:** Consider whether the questionnaire fosters a positive intention among respondents. Ensure that the survey experience is engaging, respectful, and motivates participants to provide thoughtful responses.

g) Revise the Questionnaire

- i) **Refine Questions:** Modify or remove any problematic questions based on feedback.
- ii) **Ensure Consistency:** Check for consistency in question wording and response options.

Use Feedback for Revision: Collect feedback from participants about their experience with the questionnaire. Use this feedback to make revisions and improvements to the questionnaire, addressing any identified issues or shortcomings.

By following these steps and addressing the questions outlined, researchers can effectively pre-test their questionnaire and make necessary adjustments to enhance its quality and validity before full-scale implementation.

h) Finalize the Questionnaire

Finally, the feedback can be used as valuable findings to revise the questionnaire (Agrawal, 2010; Taylor-Powell & Marshall, 1998). finalizing a questionnaire involves ensuring that it comprehensively addresses the research objectives while maintaining clarity and relevance. The process includes several key tasks and iterative steps to refine the questionnaire before it is administered. Here's how to effectively finalize a questionnaire:

Steps to Finalize a Questionnaire:

i) Evaluate the Information Coverage

- (1) **Compare with Objectives:** Ensure that the questions align with the research objectives and that the data collected will address the research questions or hypotheses listed in Table I.
- (2) **Identify Gaps:** Check if any key aspects or variables needed to test the hypotheses are missing from the questionnaire.

ii) Assess Question Necessity

- (1) **Review Each Question:** Determine if each question is necessary to obtain the desired information. Remove any redundant or irrelevant questions.
- (2) **Add Missing Questions:** If any aspects are not covered, add relevant questions to fill these gaps.

Tasks to Investigate Before Finalizing

Ensure Information Sufficiency

- **Cross-Check with Table I:** Verify that the information obtained from each question can sufficiently address the information desired as listed in Table
- **Hypotheses and Research Questions:** Confirm that the data collected from the survey will enable us to test our hypotheses or answer our research questions effectively.

Coverage Analysis

- **Comprehensive Coverage:** Ensure the survey comprehensively covers all necessary aspects to address the research questions or test the hypotheses.
- **Redundancy Check:** Identify and eliminate any questions that do not contribute to the research objectives, reducing respondent fatigue and improving the survey's efficiency.

Iterative Review Process

- **Multiple Iterations:** Recognize that the process of revising the questionnaire may involve several iterations and rewritings.
- **Feedback Integration:** Incorporate feedback from pilot testing and expert reviews to refine the questionnaire.

Example of Iterative Review Process

Initial Draft:

- List of initial questions based on objectives and hypotheses.
- Pilot test with a small sample.

- Collect feedback on clarity and relevance.

First Revision:

- Modify questions based on pilot test feedback.
- Add or remove questions to ensure comprehensive coverage.

Second Pilot Test:

- Conduct another round of pilot testing.
- Focus on new and revised questions for clarity and relevance.

Final Revision:

- Make final adjustments based on second pilot test results.
- Ensure all questions are necessary and cover the desired information.

Final Checks

- **Proofreading:** Conduct a thorough review for spelling and grammatical errors.
- **Logical Flow:** Ensure a logical flow and grouping of questions.
- **Visual Design:** Optimize the layout and design for ease of navigation.
- **Instructions:** Provide clear instructions for respondents to follow

Finalizing a questionnaire is a critical step that requires careful consideration and multiple iterations to ensure it effectively addresses the research objectives. By systematically evaluating the necessity and sufficiency of each question, and making adjustments based on feedback, we can develop a robust and comprehensive questionnaire ready for data collection.

i) ADMINISTER THE QUESTIONNAIRE:

i) Distribution: Follow-Up response rates.

ii) WHAT IS RESPONSE RATE AND HOW TO INCREASE IT?

(a) Response Rate and How to Increase It

(b) What is Response Rate?

Response rate is a critical metric in survey research that represents the proportion of completed questionnaires returned by respondents compared to the total number of surveys distributed. It is calculated using the formula:

$$\text{Response rate} = \frac{\text{Number of Completed Responses}}{\text{Total Number of Surveys Distributed}} \times 100$$

A high response rate is desirable as it indicates that the sample is likely representative of the population, thereby reducing sampling errors. However, it is essential to balance response rate with the quality of the responses to avoid biases.

iii) Importance of Response Rate

- (1) **Representativeness:** A higher response rate helps ensure that the sample accurately reflects the population, enhancing the validity of the survey results.
- (2) **Reduction of Sampling Error:** Increasing the response rate reduces sampling error, leading to more reliable and generalizable findings.
- (3) **Avoiding Non-Response Bias:** High response rates help mitigate the risk of non-response bias, where the characteristics of non-respondents differ from those of respondents, potentially skewing the results.

(a) Strategies to Increase Response Rate

iv) To enhance the response rate, consider the following strategies:

(1) Pre-Survey Notifications:

- **Send Advance Notices:** Inform potential respondents about the upcoming survey through emails, letters, or phone calls to prepare them and explain its importance.
- **Set Expectations:** Clearly outline what the survey will involve, its purpose, and how long it will take.

(2) Follow-Up Reminders:

- **Send Reminders:** Follow up with non-respondents through multiple reminders at different intervals. Email reminders, phone calls, or text messages can be effective.
 - **Multiple Attempts:** Make several attempts to reach non-respondents, ensuring persistence without being intrusive.
- (3) **Incentives and Rewards:**
- **Offer Incentives:** Provide tangible rewards such as gift cards, discounts, or entry into a prize draw to motivate participation.
 - **Charity Donations:** Offer to make a charitable donation on behalf of the respondent for each completed survey.
 - **Summary of Results:** Promise to share a summary of the survey results with respondents to give them a sense of contribution to the research.
- (4) **Clarity and Transparency:**
- **State the Purpose:** Clearly explain the aim of the study, its significance, and who is conducting it. This transparency builds trust and encourages participation.
 - **Sponsor Information:** Provide information about the sponsors or organizations behind the survey to add credibility.
- (5) **Confidentiality and Privacy:**
- **Assure Anonymity:** Emphasize that responses will be confidential and used only for research purposes. Reassure respondents of their privacy.
 - **Confidentiality Promises:** Include a confidentiality statement at the beginning and end of the survey, especially for web-based surveys, to reassure respondents about data security.

Enhancing the response rate is vital for obtaining a representative sample and reliable data. By employing strategies such as sending pre-survey notifications, following up with reminders, offering incentives, maintaining clarity and transparency, and assuring confidentiality, researchers can significantly improve the likelihood of respondents completing the survey. While a high response rate is crucial, it must be balanced with the need to avoid biases to ensure the validity and reliability of the survey findings.

j) ANALYZE THE DATA AND ETHICS ISSUES:

Ethical considerations are paramount in survey research, especially concerning participants' rights and legal obligations. Here's an overview of ethical issues in survey research:

Participant Willingness: It's essential to respect individuals' willingness to participate in surveys. Coercion or pressure to participate is unethical and violates participants' rights.

Legal Compliance: Different countries have varying laws and regulations regarding data protection and participant rights. Researchers must ensure that their survey methodologies comply with relevant legal frameworks, such as the Data Protection Act 1998 in the UK.

Informed Consent: Obtaining informed consent from participants is crucial. Participants should understand the purpose of the survey, how their data will be used, and any potential risks or benefits associated with participation.

Confidentiality and Privacy: Researchers must uphold participants' confidentiality and privacy rights. This includes safeguarding sensitive information collected during the survey and ensuring that respondents' identities remain anonymous unless explicitly agreed otherwise.

Voluntary Participation: Participation in surveys should be voluntary, with participants having the right to decline participation or withdraw from the study at any time without facing repercussions.

Transparency: Researchers should be transparent about the purpose of the survey, how the data will be used, and any potential conflicts of interest. Honest communication builds trust and fosters ethical research practices.

Fair Treatment: Researchers must ensure that all participants are treated fairly and without discrimination. Survey questions should be unbiased and free from language or content that may offend or marginalize certain groups.

Protection of Vulnerable Groups: Special consideration should be given to the protection of vulnerable populations, such as children, the elderly, or individuals with cognitive impairments. Additional safeguards may be necessary to ensure their rights and well-being are upheld.

Professional Integrity: Researchers should conduct surveys with integrity, honesty, and professionalism. They should adhere to ethical guidelines and standards established by professional associations or institutional review boards.

By considering these ethical issues and adhering to ethical guidelines, researchers can conduct surveys responsibly and ensure the rights and well-being of participants are protected throughout the research process.

i) What are the Responsibilities of the Participants?

- (1) The rights of the respondents should be secured and ensured in both types of surveys including self-administrated and interviewer-based. For doing this, the following point must be mentioned to acknowledge them first. Participants in surveys have certain responsibilities that contribute to the integrity and success of the research. These responsibilities include:
- (2) **Acknowledging Information:** Participants should carefully review all provided information, including the name of the organization conducting the survey, the broad field of study, and reasons why the field may be sensitive. This ensures they understand the context and purpose of the research.
- (3) **Understanding Confidentiality:** Participants must be informed whether their responses will be used confidentially or not. If data is held confidentially, participants should be assured that their privacy will be respected and that their responses will only be used for data analysis purposes.
- (4) **Estimating Survey Length:** Participants should be provided with an estimate of the time required to complete the survey. This helps them manage their time and decide if they are willing to participate.
- (5) **Cost Consideration:** Participants need to know if there are any costs associated with participating in the survey. This allows them to make an informed decision based on their financial situation.
- (6) **Recording of Interviews:** If interviews are recorded, participants should be informed beforehand. This ensures transparency and allows participants to consent to being recorded.
- (7) **Voluntary Participation:** It is crucial to emphasize the voluntary nature of participation. Participants have the right to refuse to answer questions or withdraw from the study at any time without consequence. Interviewers should respect participants' decisions and not pressure them to continue against their will.

By fulfilling these responsibilities, participants contribute to the ethical conduct of research and help ensure that their rights are respected throughout the survey process.

ii) What are the Responsibilities to the Clients?

The responsibilities to the clients in the context of preparing a questionnaire for research include:

- (1) **Respecting Client Objectives:** It is essential to understand and respect the objectives of the client. The questionnaire should be designed in a way that aligns with the goals and objectives of the research project as outlined by the client.
- (2) **Designing Unbiased Questionnaires:** Questionnaires should be designed without biases to ensure the collection of accurate and reliable data. Care should be taken to avoid leading questions or questions that may influence respondents' answers in a particular direction.
- (3) **Ensuring Efficiency: Questionnaires:** should be designed for maximum efficiency in data collection. This includes using clear and concise language, minimizing the number of questions, and structuring the questionnaire in a logical order to facilitate easy completion by respondents.

- (4) **Seeking Client Input:** Clients should be given the opportunity to review and provide feedback on the questionnaire design. Their input can help ensure that the questionnaire effectively captures the information needed to meet their research objectives.
- (5) **Obtaining Client Approval:** Before finalizing the questionnaire, it is important to obtain approval from all relevant clients. This ensures that they are satisfied with the questionnaire design and that it aligns with their expectations for the research project.
- (6) **Signing Quality Controls:** Quality control measures, such as pre-testing the questionnaire, should be conducted and signed off by the clients to ensure that the questionnaire meets the required standards for data quality and accuracy.
- (7) **Ethical Considerations:** Using questions without the agreement of all clients is considered unethical. All parties involved in the research project should be in agreement on the content and design of the questionnaire to maintain ethical standards and integrity in the research process.

Therefore, using questions without the agreement of all clients is unethical (Brace, 2018; Singer, 2008).

By adhering to these responsibilities, researchers can ensure that the questionnaire meets the needs and expectations of the clients while also upholding ethical standards in research practice.

4) CONCLUSION

Questionnaire design is a critical aspect of survey methodology that can significantly impact the results and the overall success of a study. This paper has investigated the essential elements of designing an appropriate questionnaire tailored to the study's objectives. Key steps and considerations have been highlighted to maximize the quality and effectiveness of the questionnaire.

The process begins with a clear understanding of the study's purpose, which is defined by the research questions or hypotheses. This foundational step is crucial as it guides the entire design process and can profoundly influence the survey results.

Key points in designing, writing, and organizing questions were discussed to ensure clarity, relevance, and unbiased data collection. These include choosing the right types of questions, ensuring logical flow, and maintaining respondent engagement through concise and relevant queries.

The response rate, a vital metric in survey research, was examined, emphasizing strategies to enhance it. These strategies include pre-survey notifications, follow-up reminders, incentives, clear communication of the survey's purpose, and assurances of confidentiality and privacy.

Finally, the paper briefly reviewed ethical considerations, highlighting the importance of respecting the rights of both participants and clients. This includes ensuring unbiased questions, maintaining data confidentiality, and involving clients in the questionnaire development process.

By following these guidelines and best practices, researchers can design effective questionnaires that yield reliable, valid, and actionable data, ultimately contributing to the success of their studies.

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