

Lecture 6

Survey and questionnaire Design

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Agenda

- Definition
- Advantages
- Disadvantages
- Designing rules for questionnaires
- Steps to design a questionnaire
- Survey forms and question types
- Survey design mistakes





Good questionnaires are difficult to construct,
Bad questionnaires are difficult to analyze.

Definition

A survey method is a process, tool, or technique that you can use to gather information in research by asking questions to a predefined group of people.

A survey is a data collection tool that lists a set of structured questions to which respondents provide answers based on their knowledge and experiences.

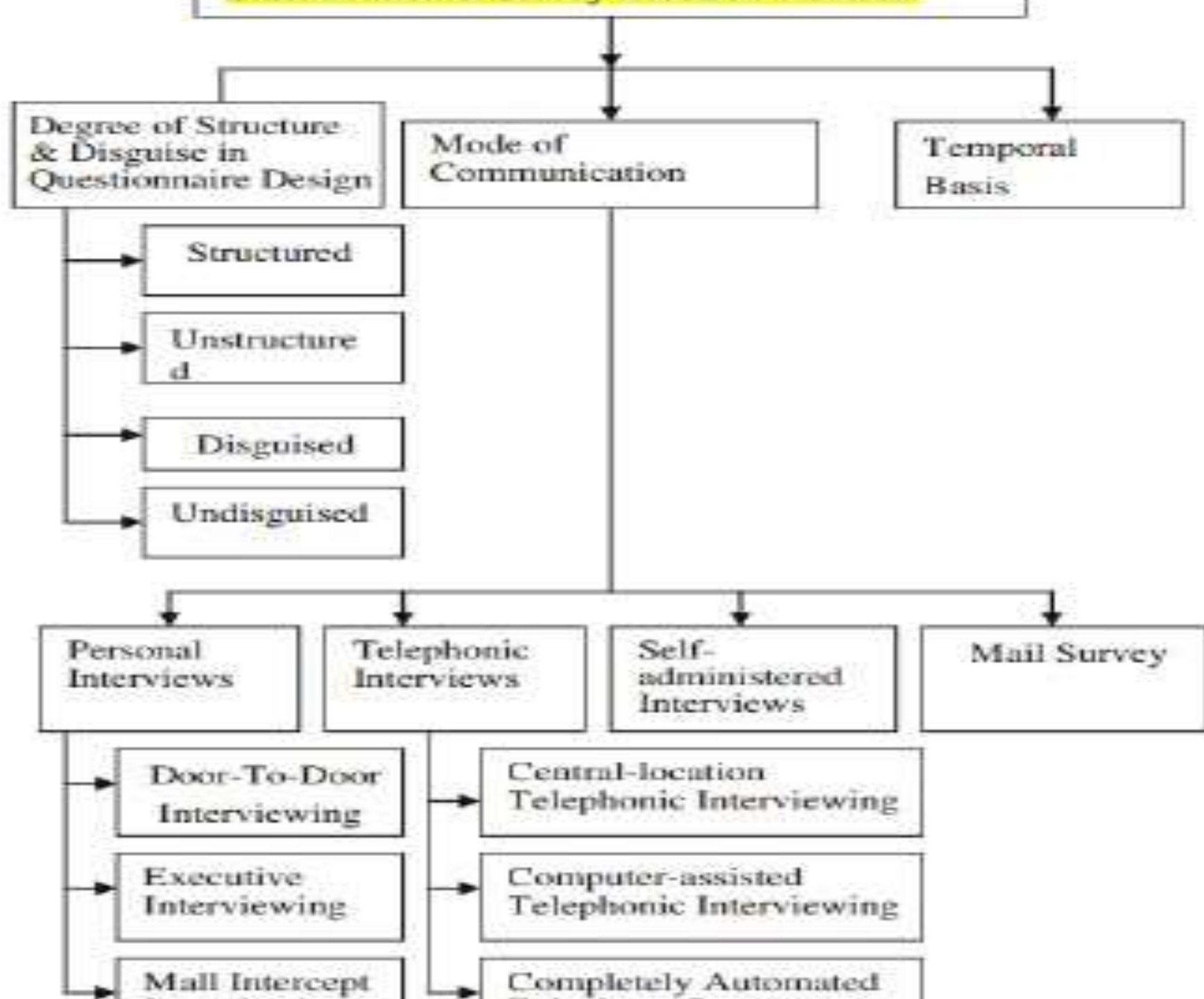


Advantages of Survey Method

- 1.As compared to other methods survey gathers a broader range of information.
- 2.Questioning is usually faster and cheaper than observation.
- 3.Questions are simple to administer.
- 4.Data is reliable.
- 5.The variability of results is reduced.
- 6.It is relatively simple to analyze, quote and interrelate the data obtained by survey method
- 7.Respondent anonymity.
- 8.No pressure for respondent.
- 9.Comparability.

Disadvantages of Survey Method

1. Unwillingness of respondents to provide information.
2. Inability of the respondents to provide information. This may be due to:
 1. Lack of knowledge;
 2. Lapse of memory;
 3. Inability to identify their motives and provide “reasons why?” for their actions.
3. Human Biases of the respondents.
4. Symantec difficulties are there - it is difficult, if not impossible, to state a given question in such a way that it will mean exactly same thing to each respondent. Similarly two different wordings of the same question will frequently produce quite different results.



A properly designed questionnaire can tap the necessary information from the respondent.

A structured question is one that has a specified number of responses. Structured interviews are for the most part, orally administered questionnaires.

Unstructured questionnaires are usually open-ended and try to probe into the mind of the respondent, allowing the interviewee to express his own thoughts.

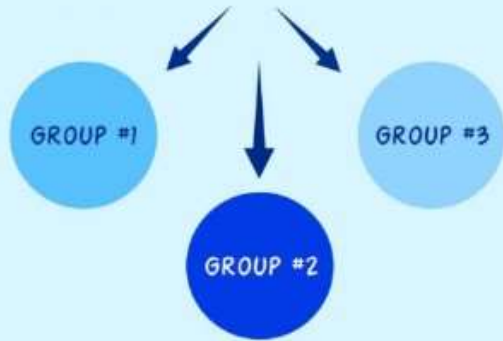
Disguised questions is one where purpose is not made obvious to the respondents and is asked in an indirect manner.

Undisguised means questions are open-ended. They are asked directly. Respondents can know what the researcher wants to know.

CROSS-SECTIONAL STUDY

Different Groups

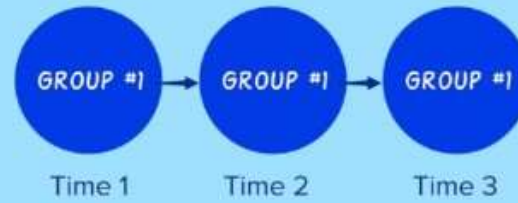
Compared at the same time



LONGITUDINAL STUDY

Same Group

Compared over the time



Retail



Education



Healthcare

TYPES OF LONGITUDINAL STUDIES

Panel Study

Cohort Study

Retrospective Study



Business



Psychology

Longitudinal studies vs. Cross-sectional studies

Longitudinal studies

Longitudinal studies take a longer time, from years to even a few decades.

A longitudinal study requires an investigator to observe the participants at different time intervals.

Longitudinal studies can offer researchers a cause and effect relationship.

In longitudinal studies, only one variable can be observed or studied.

Longitudinal studies tend to be more expensive.

Cross-sectional studies

Cross-sectional studies are quick to conduct compared to longitudinal studies.

A cross-sectional study is conducted over a specified period of time.

Cross-sectional studies cannot offer researchers a cause-and-effect relationship.

With cross-sectional studies, different variables can be observed at a single moment.

Cross-sectional studies are more accessible for companies and researchers.

Surveys come in 2 major formats (Communication mode) :

Paper form



Phone form



Online form



Types of Questions

- ▶ **Open-ended:** Ask respondents to create their own response to a questions.
 - “How would you change this product?”
 - “Additional comments:”
 - Difficult to categorize and measure
- ▶ **Forced Choice:** Respondents choose answers from possibilities given on survey.
 - Yes/No
 - Multiple choice
 - Rating scale
 - Level of agreement
 - Simplest to write and calculate

Designing rules for questionnaires

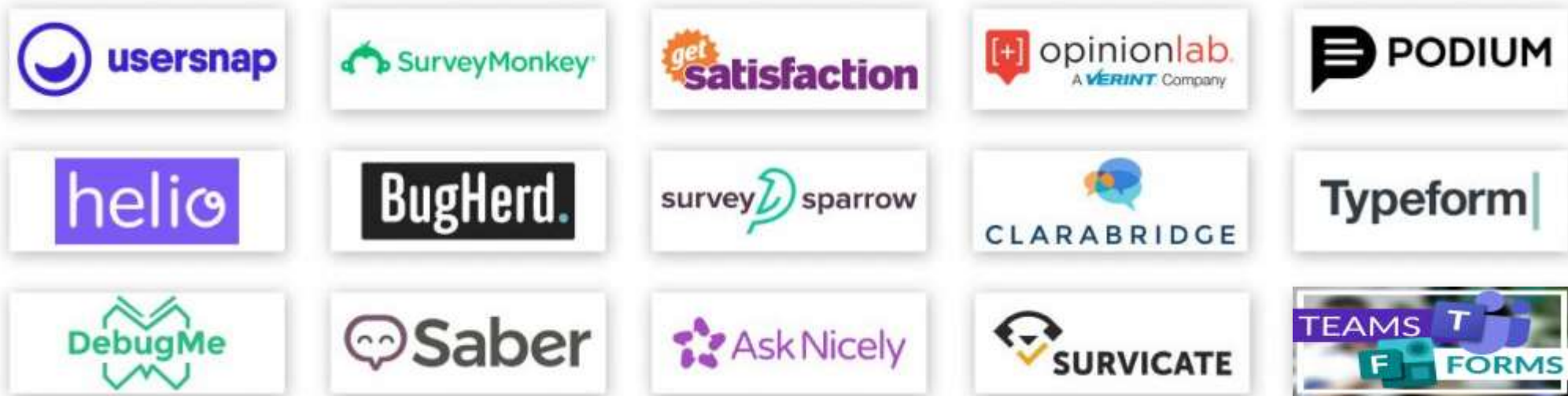
- **Careful framing and phrasing of questions.**
- The questions must clearly show the research goal to the survey respondent.
- The questions must be assembled into a logical, clear instrument that flows naturally and will keep the respondent sufficiently interested to continue to cooperate.
- Each question must provide a valid and reliable measure.
- **Careful control of data gathering by employing specially trained investigators who will observe carefully report on subtle reactions of persons interviewed**

Steps to design a questionnaire:

1. Write out the aims of your study.
2. Write out concepts/information to be collected that relates to these aims.
3. Review the current literature to identify already validated questionnaires that measure your specific area of interest.
4. Compose a draft of your questionnaire.
5. Revise the draft.
6. Assemble the final questionnaire.

- **Set your SMART goals:** Before conducting any market research or creating a particular plan, set your SMART Goals. What is that you want to achieve with the survey?
- **Begin your survey with a generalized question:** Preferably, start your survey with a General Question to understand whether the respondent uses the product or not.
- **Enhance your survey:** Choose the best, most relevant, 15-20 questions. Frame each question as a different question type, based on the kind of answer you would like to gather from each.
- **Prepare yes/no questions:** You may also want to use yes/no questions to separate people or branch them into groups of those who “have purchased” and those who “have not yet purchased” your products or services.

- **Test all electronic devices:** It becomes effortless to distribute your surveys if respondents can answer them on different electronic devices like mobiles, tablets, etc.



Question Wording

Do

"How would you rate your flight on a scale of 1-5?"

"How was your in-store experience?"

"How many days a week do you order takeaway?" (0, 1-2, 3-4, more than 5).

"Are you satisfied with our product?"

"Do you drink alcohol regularly? (At least two days a week)"

Don't

"How tiring was your flight on a scale of one 1-5?"

"How bad was your in-store experience?"

"Do you always eat takeaway and what do you order?"

"How good is our product?"

"What pub do you drink at?"



Survey design mistakes

- Questions that Use Extremely Complicated Language;
- Not Defining the Purpose of Your Survey
- Don't write leading questions
- Forcing People to Answer All the Questions
- Not Proof-Reading Your Content
- Only Using Open-Ended Questions
- Making Your Survey Too Long
- Not Listening to the Feedback You Collect
- Not Using Templates



Research methods

- For responses to be valid, questions should be unbiased.
- For a survey question to be reliable, all respondents must understand it as the researcher intended.
- For survey answers to be valid, all relevant answers should be presented to the respondent.

Peer feedback

- Peers can provide feedback on possible biases in surveys/ interview guides.
- Peers can provide feedback on their understanding of survey questions.
- Peers can provide feedback on possible answers to specific questions.

Statistical tests

Design	Data summary	Statistics & Tests
2 independent groups	Proportions Rank Ordered Mean Survival	<i>Chi-square, Fisher-exact Mann-Whitney U Unpaired t-test Mantel-Haenzel, Log rank</i>
2 related groups	Proportions Rank Ordered Mean	<i>McNemar Chi-square Sign test Wilcoxon signed rank Paired t-test</i>
More than 2 independent groups	Proportions Rank Ordered Mean Survival	<i>Chi-square Kruskal-Wallis ANOVA Log rank</i>
More than 2 related groups	Proportions Rank Ordered Mean	<i>Cochran Q Friedman Repeated ANOVA</i>
Study of Causation; one independent variable (univariate)	Proportion Mean	<i>Relative Risk Odd Ratios Correlation coefficient</i>
Study of Causation; more than one independent variable (Multivariate)	Proportion Mean	<i>Discriminant Analysis Multiple Logistic Regression Log Linear Model Regression Analysis Multiple Classification Analysis</i>