If you have any problem in writing an A+ Research Report don't hesitate to call

0712438407

0682821704

Ask MR CAPTAIN

Questionnaire

Many research projects and dissertations demand the collection of primary data from individuals. Questionnaires are often the best way of gathering such information and views. However, a badly designed questionnaire may get only unusable responses or none at all.

What do you want to know?

Before you even write the first question, it is important that you have a very clear idea about what you want your questionnaire to achieve. Write down your research goals, and think about what information you need to elicit from respondents to meet those goals. Think also about how you are going to analyse each question to get the results you need. Remember there is a difference between things you need to know, and those it would be nice to know. Eliminate unnecessary lines of questioning at the planning stage.

Clear instructions

Maximise your response rate by providing clear information and instructions as follows:

1. State who you are
2. Outline what the purpose of the survey is and why their response is important
3. Explain how answers will be treated with confidentiality and anonymity (unless agreed with the
4. respondent)
5. Provide clear instructions as to how each question should be answered - e.g. whether you are expecting one or more answers or whether answers should be ranked - and if so, is 1 high or low?
6. How to return the questionnaire and by what date

Layout

The appearance of your questionnaire will go a long way towards encouraging (or discouraging) responses. Always allow enough room for respondents to answer questions and provide plenty of white space between questions so the questionnaire doesn't look too 'busy'. Use clear headings and numbering if appropriate. Although it's tempting to use smaller fonts in order to squeeze your questionnaire onto a smaller number of pages, don't make it so small that it becomes illegible. A minimum of 10pt should be used

Designing and Using Questionnaires

This is the information age. More information has been published in the last decade than in all previous history. Everyone uses information to make decisions about the future. If our information is accurate, we have a high probability of making a good decision. If our information

is inaccurate, our ability to make a correct decision is diminished. Better information usually leads to better decisions.

Ways to Get Information

There are six common ways to get information. These are: literature searches, talking with people, focus groups, personal interviews, telephone surveys, and mail surveys.

A *literature search* involves reviewing all readily available materials. These materials can include internal company information, relevant trade publications, newspapers, magazines, annual reports, company literature, on-line data bases, and any other published materials. It is a very inexpensive method of gathering information, although it generally does not yield timely information. Literature searches take between one and eight weeks.

Talking with people is a good way to get information during the initial stages of a research project. It can be used to gather information that is not publicly available, or that is too new to be found in the literature. Examples might include meetings with prospects, customers, suppliers, and other types of business conversations at trade shows, seminars, and association meetings. Although often valuable, the information has questionable validity because it is highly subjective and might not be representative of the population.

A *focus group* is used as a preliminary research technique to explore people's ideas and attitudes. It is often used to test new approaches (such as products or advertising), and to discover customer concerns. A group of 6 to 20 people meet in a conference-room-like setting with a trained moderator. The room usually contains a one-way mirror for viewing, including audio and video capabilities. The moderator leads the group's discussion and keeps the focus on the areas you want to explore. Focus groups can be conducted within a couple of weeks and cost between two and three thousand dollars. Their disadvantage is that the sample is small and may not be representative of the population in general.

Personal interviews are a way to get in-depth and comprehensive information. They involve one person interviewing another person for personal or detailed information. Personal interviews are very expensive because of the one-to-one nature of the interview ($50+ per interview). Typically, an interviewer will ask questions from a written questionnaire and record the answers verbatim. Sometimes, the questionnaire is simply a list of topics that the research wants to discuss with an industry expert. Personal interviews (because of their expense) are generally used only when subjects are not likely to respond to other survey methods.

Telephone surveys are the fastest method of gathering information from a relatively large sample (100-400 respondents). The interviewer follows a prepared script that is essentially the same as a written questionnaire. However, unlike a mail survey, the telephone survey allows the opportunity for some opinion probing. Telephone surveys generally last less than ten minutes. Typical costs are between four and six thousand dollars and they can be completed in two to four weeks.

Mail surveys are a cost effective method of gathering information. They are ideal for large sample sizes, or when the sample comes from a wide geographic area. They cost a little less than telephone interviews, however, they take over twice as long to complete (eight to twelve weeks). Because there is no interviewer, there is no possibility of interviewer bias. The main disadvantage is the inability to probe respondents for more detailed information.

E-mail and internet surveys are relatively new and little is known about the effect of sampling bias in internet surveys. While it is clearly the most cost effective and fastest method of distributing a survey, the demographic profile of the internet user does not represent the general population, although this is changing. Before doing an e-mail or internet survey, carefully consider the effect that this bias might have on the results.

The first step of actually writing the questionnaire is to determine the types of questions you will ask. There are three main types of questions:

1. Open-ended questions.
2. Closed-ended questions.
3. Scaled-response questions.

An open-ended question is one in which the respondent is free to supply any answer to the question they want. An example of open-ended questions you are probably familiar with is essay test questions. Some of the advantages to this type of question is they don't restrict the respondent to a particular list of answers, they provide the researcher with a much wider group of information, and they allow an interviewer to probe respondents for further and more in-depth information about a particular topic. The main disadvantages are this type of question is much more time consuming, and may be biased towards the responses of more articulate survey participants.

Closed-ended questions are questions requiring the participant to choose from a list of possible answers. Closed-ended questions come in two types. One type is a choice between only two answers. Examples of this are yes/no questions and true/false questions. The other type is multiple-choice questions. You may be very familiar with this type of question if you have ever had to take a scan-tron test in the testing center. The advantages of closed-ended questions are they are cheaper and easier to administer and easier to analyze the collected data. However, there are also several disadvantages. Closed-ended questions do not provide as rich a source of information as open-ended questions. Sometimes a person's true response to a multiple-choice question may not be an available answer. In addition, research has found that people tend to be biased toward the first choice in two-choice questions or towards the first and last choices in multiple-choice questions.

Scaled-response questions are questions that require participants to indicate on a scale their attitude toward a particular subject. If you have ever filled out a teacher-evaluation form then you have participated in a questionnaire that contained scaled-response questions. The main

advantage of this type of question is its ability to measure a respondent's intensity of feeling toward a subject. The main difficulty is the possibility that respondents don't understand the scale. For example, if a question asks, "On a scale from one to ten, what is your opinion about…" The participant may be wondering, "is ten the highest or is one the highest?"

Psychosocial Measurement Scales

Likert Scales

Likert scaling is a bipolar scaling method, measuring either positive or negative response to a statement. (Traditionally a *five-point* scale is used.)

A large breakfast is a good idea before morning exams:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Likert scales can be a comprised of a number of statements expressing a viewpoint about some topic, issue, behaviour, etc. The subject is asked to indicate to what degree he/she agrees or disagrees with the viewpoint expressed in each statement. For example:

Diagram one

1. Library opening hours should be extended during weekend to take account of actual usage by staff and students.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(Points)	(1)	(2)	(3)	(4)	(5)

Subjects are awarded 1-5 points according to the strength of their agreement. Points are summated for all the statements to provide a score for the subject.

The scoring vector can be and often is reversed for some questions. For example:

2. Some B.Sc.(Hons) modules should be taught in the evening in order to optimize room and other resource usage.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(Points)	(5)	(4)	(3)	(2)	(1)

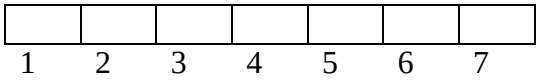
This assumes that a respondent who strongly agrees with statement 1 is likely to strongly disagree with statement 2, and thus each should receive the same number of points. Where this approach is adopted, usually the statements represent a random mix of each vector.

Semantic Differential Scales

There are principally scales for measuring attitudes. They consist of a number of statements asking the respondent to rate some event, service, behaviour, etc. The respondent provides a rating along a scale of 1 to 7 (7 is common, but can be varied - 1 to an odd number is generally considered best practise). For example:

Diagram two

How would you rate the helpfulness of library staff.



The subject ticks the appropriate box. As in the Likert scale, the scoring vector can be reversed if desired. As before, the points for each item are summated to give an over-all score.

The semantic differential scale asks a person to rate a product, brand, or company based upon a *seven-point* rating scale that has two bipolar adjectives at each end. The following is an example of a semantic differential scale question.

Example:
Would you say our web site is:

(7) Very Attractive
(6)
(5)
(4)
(3)
(2)
(1) Very Unattractive

Notice that unlike the rating scale, the semantic differential scale does not have a neutral or middle selection. A person must choose, to a certain extent, one or the other adjective.

Semantic Differential Scale Example

DIAGRAM THREE

The customer care representative was.

	Very Much	Somewhat	Neither	Somewhat	Very Much	
	1	2	3	4	5	
helpful						unhelpful
friendly						unfriendly
polite						rude

The Dichotomous Question

The dichotomous question is generally a "yes/no" question. An example of the dichotomous question is:

Have you ever purchased a product or service from our website?
1. Yes
2. No

Advantages of Written Questionnaires

i. Questionnaires are very cost effective when compared to face-to-face interviews. This is especially true for studies involving large sample sizes and large geographic areas. Written questionnaires become even more cost effective as the number of research questions increases.

ii. Questionnaires are easy to analyze. Data entry and tabulation for nearly all surveys can be easily done with many computer software packages.

iii. Questionnaires are familiar to most people. Nearly everyone has had some experience completing questionnaires and they generally do not make people apprehensive.

iv. Questionnaires reduce bias. There is uniform question presentation and no middle-man bias. The researcher's own opinions will not influence the respondent to answer questions in a certain manner. There are no verbal or visual clues to influence the respondent.

v. Questionnaires are less intrusive than telephone or face-to-face surveys. When a respondent receives a questionnaire in the mail, he is free to complete the questionnaire on his own time-table. Unlike other research methods, the respondent is not interrupted by the research instrument.

Disadvantages of Written Questionnaires

i. One major disadvantage of written questionnaires is the possibility of low response rates. Low response is the curse of statistical analysis. It can dramatically lower our confidence in the results. Response rates vary widely from one questionnaire to another (10% - 90%), however, well-designed studies consistently produce high response rates.

ii. Another disadvantage of questionnaires is the inability to probe responses. Questionnaires are structured instruments. They allow little flexibility to the respondent with respect to response format. In essence, they often lose the "flavor of the response" (i.e., respondents often want to qualify their answers). By allowing frequent space for comments, the researcher can partially overcome this disadvantage. Comments are among the most helpful of all the information on the questionnaire, and they usually provide insightful information that would have otherwise been lost.

iii. Nearly ninety percent of all communication is visual. Gestures and other visual cues are not available with written questionnaires. The lack of personal contact will have different effects depending on the type of information being requested. A questionnaire requesting factual information will probably not be affected by the lack of personal contact. A questionnaire probing sensitive issues or attitudes may be severely affected.

iv. When returned questionnaires arrive in the mail, it's natural to assume that the respondent is the same person you sent the questionnaire to. This may not actually be the case. Many times business questionnaires get handed to other employees for completion. Housewives sometimes respond for their husbands. Kids respond as a prank. For a variety of reasons, the respondent may not be who you think it is. It is a confounding error inherent in questionnaires.

v. Finally, questionnaires are simply not suited for some people. For example, a written survey to a group of poorly educated people might not work because of reading skill problems. More frequently, people are turned off by written questionnaires because of misuse.

Designing questionnaires

Good questionnaire design is important for several reasons. A good questionnaire will be effective in addressing the research objectives - collecting valid and reliable data to address the research problem clearly and unambiguously. It also plays a very important part in the practical tasks of data collection and data processing and analysis: helping the interviewer gather and record data accurately and effectively; helping the respondent provide accurate, complete and reliable data; and helping the data analyst prepare accurate tables and analyses. In addition, it is important in representing research, and the research industry, to the wider world.

There are many ways in which error can creep into the research process; a poorly designed questionnaire can open the floodgates to it. Here are some of the ways in which this can happen and the sort of problems that arise as a result:

1. **A poorly designed questionnaire** can result in an unpleasant experience for the respondent and a poor perception of research and the research industry, which can in turn lead to an unwillingness to take part in future research.

2. **A poor introduction or presentation of the research** can lead to high levels of non-response and problems with representativeness of the sample
3. Poorly conceived questions not measuring what they claim to measure mean the data collected are not valid.
4. **Unsuitable or irrelevant content** - questions that lie outside the respondent's frame of reference, or which relate to subjects about which he or she has little or no knowledge, or which rely too heavily on the respondent's memory to provide accurate answers will produce inaccurate and unreliable data.
5. **Poorly worded questions** (using ambiguous, vague, difficult, unusual or technical language) can be misunderstood, misinterpreted or interpreted differently by different people and will lead to unreliable and invalid data.
6. **A badly structured questionnaire** (difficult, sensitive or personal questions appearing too early, before sufficient rapport has been established) can result in refusals to answer or complete the questionnaire.
7. **Poor question order may result in order bias**, or contamination of later responses by earlier questions.
8. **Long, boring or repetitive questions may result** in a loss of interest in answering or produce inaccurate responses.
9. **A questionnaire that is too long can lead to respondent fatigue,** loss of interest and so poor quality data; too short and it may mean that there is no time to build rapport.
10. **Inadequate or poorly written interviewer** or respondent instructions can result in response and recording errors.
11. **Poor layout can lead to errors in recording and data processing**.

What is involved in the questionnaire design process?

The questionnaire design process involves converting the research objectives into meaningful questions and assembling the questions in an effective order on a workable questionnaire. There are several stages to the process:

1. clarifying what it is exactly that you need the questions to measure
2. wording the questions
3. deciding on the types of question and the response format
4. putting the questions into an effective and logical order
5. designing the layout
6. testing out a draft version
7. Revising the draft and agreeing a final version.

What is meant by the terms 'open-ended and 'closed' questions? What are the advantages and disadvantages of each type?

In an open or free response question the respondent gives the response in his or her own words. For example, '*What is it about X that makes you say that?'* The respondent in a personal interview gives the answer verbally to the interviewer, who writes it down (or in a telephone interview or qualitative interview might record it); in a self-completion interview, he or she writes or types the answer into the space provided on the questionnaire. The responses to open questions can be 'pre-coded' or listed in the questionnaire (a list which the respondent does not see). The interviewer records the response or responses that corresponds to the respondent's

answer. If the answer is not on the list, the interviewer records it under 'Other', which is usually accompanied by the instruction 'Write in' or 'Specify'.

A closed question offers the respondent a choice of answers. The alternatives may be read out or shown to him or her on a card (known as a show card or prompt card). In a self-completion questionnaire, the respondent may be asked to tick a box corresponding to the answer, or underline or circle the response.

Response 'scales' are a form of closed question often used to measure attitudes and opinions. Scales are also used to measure such things as preference, likelihood to buy and satisfaction. The choice of scale and response format will depend on your information requirements, the level of sensitivity that you need in measuring the issue under investigation and the suitability for the method of data collection.

Advantages: open questions

1. Make respondents feel more at ease and in control
2. Can collect a wide range of responses
3. Responses in respondent's own words
4. Chance to probe for more detail
5. Easier to word than closed questions

Disadvantages: open questions

1. Requires more of respondent, interviewer and DP
2. More time consuming, more expensive
3. Detail or meaning can be lost

Advantages and disadvantages: closed questions

Relatively easy to administer
Take up less time than open questions
Easier for data processing
Hard to design
Don't get 'real' response
Too much in succession can be boring and repetitive

What are the pitfalls in question wording? Give examples of some poorly worded questions. The pitfalls in question wording include:

1. **Vaguely worded questions, e.g. 'Do you have a car?'**
   Unfamiliar words, jargon, abbreviations, e.g. 'Which of these FABs do you drink nowadays?'
   Words or phrases that are difficult to pronounce/read out, e.g. 'an inanimate object'
2. **Double-barrelled questions**, e.g. 'Do you agree or disagree that hunting with dogs and fishing should be banned?'
3. **Negatively phrased questions**, 'Do you agree or disagree that serving as a soldier in the frontline is not a job for a woman?'

4. **Long or convoluted questions, e.g.** 'Thinking back to the last time you went on holiday, but excluding any weekend or short breaks or any holidays you took in this country, what type of holiday was that?'

Questions which overtax the respondent's memory 'Thinking back five years, where did you go on holiday that summer?'

Leading questions, e.g. 'What do you think of the recent flood of immigration?'

Questions using sensitive or loaded 'non-neutral' words, e.g. 'What do you think of handouts for the poor?'

Questions that make assumptions, e.g. 'When did you first start drinking?'

Hypothetical questions, e.g. 'If you were ever to visit Spain on holiday, what type of accommodation would you look for?'

Questions with overlapping response categories, e.g. 'How many times a week on average do you visit the gym?.

i. None
ii. Once or twice
iii. Two to three times
iv. Three or more times'

Questions with insufficient response categories, e.g. 'How many shops would you be prepared to visit in order to find a copy of X magazine?'

i. One other
ii. Two or three others
iii. I would keep looking until I got a copy

Anonymity and Confidentiality

An anonymous study is one in which nobody (not even the researcher) can identify who provided data. It is difficult to conduct an anonymous questionnaire through the mail because of the need to follow-up on nonresponders. The only way to do a follow-up is to mail another survey or reminder postcard to the entire sample. However, it is possible to guarantee confidentiality, where those conducting the study promise not to reveal the information to anyone. For the purpose of follow-up, identifying numbers on questionnaires are generally preferred to using respondents' names. It is important, however, to explain why the number is there and what it will be used for.

Some studies have shown that response rate is affected by the anonymity/confidentiality policy of a study. Others have reported that responses became more distorted when subjects felt threatened that their identities would become known. Others have found that anonymity and confidentiality issues do not affect response rates or responses.

The Length of a Questionnaire

As a general rule, long questionnaires get less response than short questionnaires. However, some studies have shown that the length of a questionnaire does not necessarily affect response. More important than length is question content. A subject is more likely to respond if they are involved and interested in the research topic. Questions should be meaningful and interesting to the respondent.

Incentives
Many researchers have examined the effect of providing a variety of nonmonetary incentives to subjects. These include token gifts such as small packages of coffee, ball-point pens, postage stamps, key rings, trading stamps, participation in a raffle or lottery, or a donation to a charity in the respondent's name. Generally (although not consistently), nonmonetary incentives have resulted in an increased response. A meta-analysis of 38 studies that used some form of an incentive revealed that monetary and nonmonetary incentives were effective only when enclosed with the survey. The promise of an incentive for a returned questionnaire was not effective in increasing response. The average increase in response rate for monetary and nonmonetary incentives was 19.1 percent and 7.9 percent, respectively.

Most researchers have found that higher monetary incentives generally work better than smaller ones. One researcher proposed a diminishing return model, where increasing the amount of the incentive would have a decreasing effect on response rate. A meta-analysis of fifteen studies showed that an incentive of 25¢ increased the response rate by an average of 16 percent, and $1 increased the response by 31 percent.

Notification of a Cutoff Date
Several researchers have examined the effect of giving subjects a deadline for responding. While a deadline will usually reduce the time from the mailing until the returns begin arriving, it appears that it does not increase response, and may even reduce the response. One possible explanation is that a cutoff date might dissuade procrastinators from completing the questionnaire after the deadline has past.

Reply Envelopes and Postage
A good questionnaire makes it convenient for the respondent to reply. Mail surveys that include a self-addressed stamped reply envelope get better response than business reply envelopes. Some investigators have suggested that people might feel obligated to complete the questionnaire because of the guilt associated with throwing away money--that is, the postage stamp. Others have pointed out that using a business reply permit might suggest advertising to some people. Another possibility is that a business reply envelope might be perceived as less personal.

A meta-analysis on 34 studies comparing stamped versus business reply postage showed that stamped reply envelopes had a 9 percent greater aggregate effect than business reply envelopes. In another meta-analysis on nine studies, an aggregate effect of 6.2 percent was found.

The Outgoing Envelope and Postage
There have been several researchers that examined whether there is a difference in response between first class postage versus bulk rate. A meta-analysis of these studies revealed a small, but significant, aggregate difference of 1.8 percent. Envelopes with bulk mail permits might be perceived as "junk mail", unimportant, or less personal, and thus will be reflected in a lower response rates.

A few researchers have also examined whether metered mail or stamps work better on the outgoing envelope. The results of these studies suggest a small increase in response favoring a

stamped envelope. A meta-analysis of these studies revealed that the aggregate difference was slightly less than one percent.

Many researchers have reported increased response rates by using registered, certified, or special delivery mail to send the questionnaire. The wisdom of using these techniques must be weighed against the consequences of angering respondents that make a special trip to the post office, only to find a questionnaire.

It is not clear whether a typed or hand-addressed envelope affects response. One study, conducted at the University of Minnesota, reported that students responded better to hand-addressed postcards, while professors responded better to typed addresses.

This writer could find no studies that examined whether gummed labels would have a deleterious effect on response rate, although we might predict that response rate would be less for gummed labels because they have the appearance of less personalization.

This writer could also find no studies that examined whether the color of the envelope affects response rate. First impressions are important, and the respondent's first impression of the study usually comes from the envelope containing the survey. Therefore, we might predict that color would have a positive impact on response because of its uniqueness.

Research Questions

In qualitative study inquirers state research questions, not objectives (i.e. specific goals for the research) or hypotheses (i.e. predictions that involve variables and statistical tests).

Example: How do students use program development tools?