

Strategies for Designing a Research Questionnaire

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Abstract

In a research methodology, the task of data collection begins after well defining and designing a research problem. In data collection for the study, the researcher has to bear in mind two types of data viz., primary and secondary. There are several methods of collecting primary data, particularly in surveys and descriptive researches. The questionnaire method of data collection is quite popular, especially in a case of big enquiries. Questionnaires are seen as having complementary strength and weaknesses. They are usually viewed as a more objective research tool that can produce generalizable results because of large sample sizes. Well designed questionnaires are highly structured to allow the same types of information to be collected from a large number of people in the same way and for data to be analyzed quantitatively and systematically. Questionnaire is considered as the heart of a survey operation, thus it needs to be constructed very carefully, if not set up properly, the survey can bound to fail. This paper aims to provide guidance for constructing questionnaires and developing procedures to administer them to achieve valid and reliable results, which can be attained if a logical process is followed.

Key words: Questionnaire, Survey research and Respondents.

Introduction

Questionnaires are typically used for survey research, to determine the current status or 'situation'. They are also used to measure the difference in status 'before' and 'after' to determine changes that may be attributed to an educational programme. They are widely used to collect information considering in account the people's or organization's level of knowledge, attitude, personalities, beliefs or preferences. They are best used for collecting factual data so appropriate questionnaire design is essential to ensure that one can obtain valid responses to the designed questions. It consists of a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is sent to respondents who comprehend the question and

reply it in the space provided. After answering the questions, the respondents return it to the researcher. The form of questions in a questionnaire may be either closed (i.e. 'yes', 'no' or multiple point type questions) or open-ended (i.e. inviting free response), and they are typed out and printed. (Kothari, 2006:101)

Researcher should note the following with regard to these three main aspects of a questionnaire.

1. General Form:

A questionnaire can either be structured or unstructured. Structured questionnaires consist of definite, concrete and pre-determined questions. They are framed with exactly the same wording and order to all respondents. The form of the question may be either closed or open.

2. Question Sequence:

Question sequence should move from general to the more specific. The question sequence must be clear and smooth, the relation and meaning of one question to another should be readily apparent to the respondent. Simple and easy question should be designed to arouse human interest. The connecting questions should be vital to the research problem and a link should be established through successive questions. The difficult questions should be kept at the end, such that even if unanswered other relevant information can be collected from the previous questions.

3. Question Formulation and Wording:

The researcher should see that no ambiguity and confusion should be created in the question. All the questions should meet the following standards: easily understood, conveying only one thought at a time and concrete. Question wording, should not bias the answer.

Aims and Objectives

It has two main objectives revolving around its designing viz:

- To maximize the proportion of subjects answering the questionnaire- that is, the response rate.
- To obtain accurate relevant information for the survey.

Preparation of Questionnaire

Questionnaires are usually viewed as an objective research tool that can produce generalized results because of large sample sizes, as in the study: “An Assessment of the Prevailing Teaching Methods for Teaching English at the Secondary Level in the Central Gujarat Region”. The researcher used the questionnaire method as one of the tools for data collection. The stages of preparing the questionnaire were well borne in mind. The appeal, aim, purpose of the proposed study and also the benefits likely to accrue from it were set forth in clear terms keeping the research questions and objectives in view, who and what is the appropriate population to be studied.

Pattern of the Designed Teacher’s Questionnaire

A questionnaire was prepared to get information regarding the teaching methods and techniques used by the secondary teachers of English as a second language. The questionnaire had two sections. In the first section, personal details about the teachers such as their name, age, sex, academic qualification, teaching experience, frequency of the training programmes attended were given in order to know their association with any ELT organization and the level of their updated knowledge. The second section aimed to collect information regarding the classroom teaching methodology, techniques and teaching aids used in the classrooms, about learners’ involvement and the means used to create and sustain their interest, keeping their individual differences in mind.

Stages of Preparing a Questionnaire

- **Determine the Purpose**

Before creating a questionnaire certain questions should be posed and thus it is a good idea to start with research questions or objectives. Usually the heading or the title of research should be self-explanatory but if some further explanation is necessary it must be given. The appeal should make clear, the importance for the respondents to fill it up in order to realize the validity and utility of the research project. The wording of appeal should be rich that an interest is created among the respondents. They can be made aware of their contribution which is likely to make difference in the world of knowledge and they can feel proud to be a factor in the promotion of knowledge.

Appeal can also be made effective by offering the respondents that their names will be kept anonymous.

- **Decide what is to be measured**

It should be based on the objectives of the researcher's educational programme. What is to be measured should be borne in mind e.g. attitude, knowledge, skills, goals, intentions, aspirations, etc.

- **Who should be asked?**

The researcher should be clear who and what is the appropriate population to be studied or questioned? Whatever population is studied or the sampling method used, a high percentage of respondents are critical to be ensured that the respondents are truly representative of the population being studied. A good deal depends upon the types of respondents covered by the questionnaire.

Most of all, the respondent must be of the type who is competent to answer the kind of questions contained to a particular questionnaire. For example, as in this study if the questionnaire is about the assessment of the prevailing teaching methods of English at the secondary level a business executive can hardly be expected to fill up such a questionnaire. It can be answered only by those who are serving in this field. However, certain types of questionnaires are filled up by all concerned.

- **Consider the Audience**

To ensure that the survey instrument developed is appropriate for the audience, 'field test' the questionnaire with other people similar in age, educational level to the respondents before administering the final version.

- **Choose an Appropriate Data Collection Method**

Questionnaires can either be mailed, web based discussed through telephone or personal interview can be done.

- **Choose a Collection Procedure for Data Collection**

Respondents should be given assurance regarding the data that it will not be shared; information will be used for the said purpose and destroyed after the survey is completed. Confidentiality must never be breached with a view to attaining honest and complete answers from respondents.

- **Title the Questionnaire**

A brief purpose of the study will let the respondent know what it is about, thus enabling fruitful response and clarity in understanding and answering questions.

- **Start with Informal questions**

The initial start should be relevant to the title/purpose and easy to answer so as to assure that the respondent is not intimidated.

- **Include Simple Instructions**

Instructions for completion of each section should be given like how to mark answers whether with pen, pencil, tick mark, etc.

- **Maintain the Order of the Question**

Go from general to particular, easy to difficult, factual to abstract. Begin with closed format questions and questions relevant to the main subject. Filter questions are also useful to ensure that respondents answer only relevant questions.

- **Use plain language and clarity of questions**

Simplest language should be used which should be direct and no dubiousness about them. They should lend themselves to a single interpretation. Jargons and acronyms should be avoided. Definitions can be included if needed. For the desired responses, clarity and precision are utmost important to formulate the questions.

- **Be brief and to the point**

The questionnaire should be as short as possible without jeopardizing reliability. Focus on “need to know questions” and minimize “nice to know” information.

- **Choose Measurement Scale and Scoring**

Such scales should be used to provide the information needed and are appropriate for respondents like Fixed response, Yes-No, True-False, Multiple choice, Rating scale/Continuum, Agree-Disagree, Rank Ordering, Open-ended. Answer choices should be correspond to the question in content and grammar. Be consistent in arranging the answer. Exact numbers should be used when possible [instead of frequently, rarely, etc.]. Whenever necessary define time frames. Answer categories should not overlap. If a continuum scale with numbers is used to represent concepts, surety should be made to ‘anchor’ at least the top and bottom of the scale with terms that describe meanings of the numbers. A balance should be created between the ‘negative’ or ‘low’ answer choices with ‘positive’ or ‘high’ choices on the scale. Determine in advance, how the question will be scored what to do with the incomplete or unclear responses or missing data.

- **Ask one question at a time**

‘Double barreled’ and ‘loaded’ questions should be avoided to keep away from confusion for the respondent into not knowing how to answer. A question should be such as to give a direct and clear response. It reflects as to minimize ‘bias’ in questions, simply which can be very taxing and torturing for the respondents.

- **Arrange questions in a logical serial order**

Similar questions such as by topic or scoring can be grouped together. An outline approach can be used. The question should be broken up into classes and each class should have a number of questions which are mutually interrelated. The order of questions should be such that the first should lead naturally to the second. The second may depend upon the first, but the first should not depend upon the second; otherwise the order of questions will cease to be systematic and will become chaotic.

- **Minimize Open Ended questions**

‘Essay’ type questions should be avoided as they look like a test at school which is also difficult to score and summarize. On the contrary give the respondent room to comment about individual questions or the survey as a whole. If necessary ask for any additional comments or suggestions.

- **Attractiveness of a Questionnaire**

The attractiveness of a questionnaire is determined by the prestige of the researcher, of research organization the form and the style of the questionnaire so it should be attractive. It must be printed attractively on a high quality paper along with its colour that must be good enough to attract the attention of the respondent. The sentences by which the questions are asked should be direct and peaceful. Upon the attractiveness of the questionnaire depends to a large extent the success of the questionnaire. If the above qualities are present, the respondents are likely to take interest in the questionnaire. Finally the physical appearance of the questionnaire affects the cooperation that is received from the respondent and as such an attractive looking questionnaire, particularly in mail surveys is a plus point for enlisting cooperation.

- **Use a Convey Letter**

Mention the purpose of the study and its usefulness, why the response is needed? Promise of confidentiality, deadline for returning the survey, informed consent, what to do if questions/ doubts/ or queries arise, a note of thanks and original signature of the researcher should also be indicated.

- **Thank Respondents**

Respondents should be thanked courteously either on questionnaire or in cover letter or if possible follow up with 'reward'.

Guidelines for Constructing a Questionnaire

The researcher must pay heed to the following listed points in constructing an appropriate and effective questionnaire:

- The researcher must keep in view the problem of his study; clarity about the various aspects of his research problem to be dealt within must be borne in mind.
- Researchers should decide whether to use open or close-ended questions depending on the kind of analysis intended. In this study pertaining to the need seventeen close ended and three open ended questions were designed. Questions should be simple and constructed with a view to their forming a logical part of a well thought out tabulation plan.
- Rough draft of the questionnaire should be prepared giving a prior thought to the appropriate sequence of questions. Researchers must re-examine and revise the rough draft for a better one with consultancy of the guide and experts. Technical defects must be minutely scrutinized and removed. As the researcher's teacher's questionnaire underwent many versions and it was finalized thereafter. The first version comprised of thirty three questions. In the second version fifteen questions were reshuffled and modified. In the third version, after editing and revising, ten questions were deleted, curtailing it to twenty-four questions in the fourth version, as they did not meet the criteria of the study. The fourth version comprised of twenty four questions. In the fifth version minor changes were made in a few questions. The questionnaire was almost finalized and finally twenty questions were selected with seventeen questions with fixed responses and three open ended questions were listed. The questionnaire was finally ready for the pilot study.

Administering the Questionnaire

It is a must to administer the Questionnaire. It can be self administered, given to experts for their reviews and suggestions. After administering the questionnaire thoroughly, it can then be introduced for a pilot study. Pilot study should be undertaken for pre-testing the questionnaire. Corrections can be done in the light of the results of the pilot study that is, piloted on a small sample of people characteristic of those in survey. As discussed and known the complexity of designing a questionnaire is very vivid and time consuming, as each and every aspect has to be given minor attention, so it is impossible even for the experts to get it right for the first time round. Pilot survey is in fact the replica and rehearsal of the main survey. Such a survey brings to light the weaknesses (if any) of the questionnaire and of the survey techniques. In a small survey, the drafted questionnaire is pre-tested. In a large survey there may be three phases of piloting. The first phase pertaining about a limited number of questions, effects of different wordings, how they interpret it, etc. In second phase, the whole questionnaire is administered specially to that responses between any two items should not be strongly correlated and the non response rate should be low. In the third phase the pilot test is polished to improve the question order, filter questions and layout.

As far as administration of the tool is concerned pertaining to the study the following procedure was followed. The researcher personally visited the schools selected for the study to administer the questionnaire. First of all, the researcher contacted the principal of the particular school with a formal letter explaining the purpose of the visit and requesting his or her help and cooperation in the matter. At the same time, the objective of the visit was also orally explained. Once the consent and cooperation of the head of the institution had been obtained, the names and other relevant information of the teachers teaching English at the secondary level i.e. in classes IX and X in his/her school were collected and after due permission they were personally contacted in the school itself and given a copy of the teacher's questionnaire.

Conclusions

In the light of the above discussed points, it can be enumerated that questionnaires must be carefully designed to yield valid information. Meticulous attention must be

paid to the relevance, appropriateness, intelligibility, precision of each question. The sequence and the layout of questionnaire must also be clear. Questionnaires must first be piloted and evaluated before the actual survey. The success of a research depends largely on the skill and insight with which the list of questions is formulated. These questions must be unequivocal and easily intelligible. Thus, a questionnaire is an appeal in which the aim and purpose of the research work is set forth and sincere cooperation of the respondent is sought. Thus, it can be depicted that the success of questionnaire method lies more on the quality of the questionnaire itself, which can be achieved by bearing in mind the above discussed points.

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