

>appendix

Pretesting Options and Discoveries

Pretesting is a critical activity for successful development of a survey. We explore here the purposes and methods for effectively pretesting questions and instruments.

Pretesting Options

There are various types of pretesting that can be used to refine an instrument. They range from obtaining informal reviews by colleagues to creating conditions similar to those of the final study.

Researcher Pretesting

Designers typically test informally in the initial stages and build more structure into the tests along the way. Fellow instrument designers can do the first-level pretest. One way to accomplish this is to have researchers divided into teams. One team writes the survey, while the other critically reviews it. The reviewers' and researchers' many differences of opinion are likely to create numerous suggestions for improvement. Usually at least two or three drafts can be effectively developed by bringing research colleagues into the process.

Participant Pretesting

Participant pretests require that the questionnaire be field-tested by sample participants or participant surrogates (individuals with characteristics and backgrounds similar to those of the desired participants).

Field pretests involve distributing the test instrument exactly as the actual instrument will be distributed. Most studies use two or more pretests. National projects may use one trial to examine local reaction and another to check for regional differences. Although many researchers try to keep pretest conditions and times close to what they expect for the actual study, personal interview and telephone limitations make it desirable to test in the evenings or on weekends in order to interview people who are not available for contact at other times.

Test mailings are useful, but it is often faster to use a substitute procedure. In the MindWriter example, the managers who were interviewed in the exploratory study were later asked to review the pilot questionnaire. The interviewers left them alone and returned later. Upon their return, they went over the questions

with each manager. They explained that they wanted the manager's reactions to question clarity and ease of answering. After several such interviews, the instrument was revised and the testing process was repeated with customers. With minor revision, the questionnaire was reproduced and prepared for insertion into the computer packing material.

Collaborative Pretests

Different approaches taken by interviewers and the participants' awareness of those approaches affect the pretest. If the researcher alerts participants to their involvement in a preliminary test of the questionnaire, the participants are essentially being enlisted as collaborators in the refinement process. Under these conditions, detailed probing of the parts of the question, including phrases and words, is appropriate. Because of the time required for probing and discussion, it is likely that only the most critical questions will be reviewed. The participant group may therefore need to be conscripted from colleagues and friends to secure the additional time and motivation needed to cover an entire questionnaire. If friends or associates are used, experience suggests that they introduce more bias than strangers, argue more about wording, and generally make it more difficult to accomplish other goals of pretesting such as timing the length of questions or sections.¹

Occasionally, a highly experienced researcher may improvise questions during a pretest. When this occurs, it is essential to record the interview or take detailed notes so that the questionnaire may be reconstructed later. Ultimately, a team of interviewers would be required to follow the interview schedule's prearranged sequence of questions. Only experienced investigators should be free to depart from the interview schedule during a pretest and explore participants' answers by adding probes.

Noncollaborative Pretests

When the researcher does not inform the participant that the activity is a pretest, it is still possible to probe for reactions but without the cooperation and commitment of time provided by collaborators. The comprehensiveness of the effort also suffers because of flagging cooperation.

The virtue of this approach is that the questionnaire can be tested under conditions approaching those of the final study. This realism is similarly useful for training interviewers.

Pretesting Discoveries

Participant Interest

An important purpose of pretesting is to discover participants' reactions to the questions. If participants do not find the experience stimulating when an interviewer is physically present, how will they react on the phone or in the self-administered mode? Pretesting helps discover where repetitiveness or redundancy is bothersome or what topics were not covered that the participant expected. An alert interviewer will look for questions or groups of questions that the participant perceives to be sensitive or threatening or topics about which the participant knows nothing.

Meaning

Questions that we borrow or adapt from the work of others carry an authoritativeness that may prompt us to avoid pretesting them, but they are often most in need of examination. Are they still timely? Is the language relevant? Do they need context from adjacent questions? Newly constructed questions should be similarly checked for meaningfulness to the participant. Does the question evoke the same meaning as that intended by the researcher? How different is the researcher's frame of reference from that of the average participant? Words and phrases that trigger a "what do you mean?" response from the participant need to be singled out for further refinement.

Question Transformation

Participants do not necessarily process every word in the question. They also may not share the same definitions for the terms they hear. When this happens, participants modify the question to make it fit their own frame of reference or simply change it so that it makes sense to them. Probing is necessary to discover how participants have transformed the question when this is suspected.²

Continuity and Flow

In self-administered questionnaires, questions should read effortlessly and flow from one to another and from one section to another. In personal and telephone interviews, the sound of the question and its transition must be fluid as well. A long set of questions with 9-point scales that worked well in a mail instrument would not be effective on the telephone unless you were to ask participants to visualize the scale as the touch keys on their phone. Moreover, transitions that may appear redundant in a self-administered questionnaire may be exactly what needs to be heard in personal or telephone interviewing.

Question Sequence

Question arrangement can play a significant role in the success of the instrument. Research authorities recommend starting with stimulating questions and placing sensitive questions last. Since questions concerning income and family life are most likely to be refused, this is good advice for building trust before getting to classification questions that might lead to a refusal situation. However, interest-building questions need to be tested first to be sure they are stimulating. Pretesting with a large enough sample of participants permits some experimentation with question sequence.

Skip Instructions

In interviews and questionnaires, skip patterns and their contingency sequences may not work as envisioned on paper. Skip instructions are designed to route or sequence the participant to another question contingent on his or her answer to the previous question (*branched questions*). Pretesting in the field helps to identify problems with skip instructions or symbols (e.g., box-and-arrow schematic) that the designers may not have thought of. By correcting these instructions in the revision stage, we also avoid problems with flow and continuity.

Variability

Making sure that question alternatives cover the range of possible participant answers is an important purpose of pretesting. With 25 to 100 participants in the pretest sample, statistical data on the proportion of participants answering yes or no or marking "strongly agree" to "strongly disagree" can supplement the qualitative assessment provided by the pretest interviewers. This information is useful for sample size calculations and for getting preliminary indications of reliability problems with scaled questions. When researchers use a very small pretest sample of participants, pretesting cannot provide definitive quantitative conclusions. Small samples can, however, deliver an early warning about survey questions that may not discriminate among participants or can identify sections of the survey where meaningful subgrouping may occur in the final sample.

Length and Timing

Most draft questionnaires or interview schedules suffer from lengthiness. By timing each question and section, the researcher is in a better position to make decisions about modifying or cutting material. In personal and telephone interviews, labor is a project expense. Thus, if the budget influences the final length of the questionnaire, an accurate estimate of elapsed time is essential. Videotaped or audiotaped pretests may also be used for this purpose. Their function in reducing errors in data recording is widely accepted.

When Surveying Doesn't Work

Sometimes surveying will not secure the information needed. A classic example concerns a survey conducted to discover magazines read by participants. An unusually high rate was reported for prestigious magazines, and an unusually low rate was reported for tabloid magazines. The study was revised so that the subjects, instead of being interviewed, were asked to contribute their old magazines

to a charity drive (an observation study). The collection gave a more realistic estimate of readership of both types of magazines.³

Most researchers have found that the survey is a very powerful tool in their research methods arsenal. It is only a matter of careful attention to detail and practice that will have you joining their ranks.

Reference Notes

1. The sections on methods and purposes of pretesting have been largely adapted from Jean M. Converse and Stanley Presser, *Survey Questions: Handcrafting the Standardized Questionnaire* (Beverly Hills, CA: Sage Publications, 1986), pp. 51–64, and Survey Research Center, *Interviewer's Manual*, rev. ed. (Ann Arbor: Institute for Social Research, University of Michigan, 1976), pp. 133–34. For an extended discussion of the phases of pretesting, see Converse and Presser, *Survey Questions*, pp. 65–75.
2. W. R. Belson, *The Design and Understanding of Survey Questions* (Aldershot, England: Gower, 1981), pp. 76–86.
3. Perceival White, *Market Analysis* (New York: McGraw-Hill, 1921).