

IF YOU WANT TO KNOW WHAT FACTORS INFLUENCE RESPONSE RATE, WHY NOT ASK?

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Introduction

By far the most common "measuring instrument" in the behavioral sciences is the questionnaire. Questionnaires enable a relatively large sample with a relatively low cost. However, one of the most severe limitations of many studies using questionnaires is a low response rate. Although the response rate may be raised to a reasonable level through repeated follow-ups and other subtle forms of coercion, the authors felt that a systematic and direct study of factors affecting response rate might improve the initial response rate to a mailed questionnaire.

Over the years, the literature has contained an abundance of studies investigating the possible influence of certain "gimmicks" to increase response rate. (See Table 1 for a sampling of some gimmicks and their effects on response rate.) For example, a study might examine the effect of including a quarter with the questionnaire on the response rate. Another study might examine the effect of a commemorative stamp; and another that of a hand-written signature.

The prototype study to investigate the possible effects of the commemorative stamp would be as follows: Half of the sample would receive a questionnaire with a commemorative stamp on the envelope; the other half would receive the questionnaire with metered postage. A tally would be kept of the responses from the commemorative stamp group and from the non-commemorative stamp group. From the results, an inference would be made as to whether the commemorative stamp had an effect on the response rate.

The primary purpose of this study was to find out which factors from a list of commonly used "gimmicks" would tend to influence response rate by asking the respondent directly. Factors which might affect the response rate of a questionnaire were categorized into three groups of common characteristics: (1) physical features, (2) content, and (3) administration methods. A secondary purpose dealt with preferences of format of presentation of the questions (checklist, open-ended, Likert and rank order formats were considered).

Table 1
 A SURVEY OF FACTORS AND THEIR EFFECTS ON QUESTIONNAIRE RESPONSE RATES

This technique	Will Increase the Response Rate	Will Not Necessarily Increase the Response Rate
Using colored printed stock		Horowitz & Sedlacek, 1974; Linsky, 1975
Enclosing a stamped return envelope	Erdos, 1957a; Veiga, 1974; Linsky, 1975	
A personal, signed cover letter	Erdos, 1957a; Matteson, 1974; Linsky, 1975	Horowitz & Sedlacek, 1974
A researcher of status and prestigious sponsorship	Erdos, 1957a; Linsky & Spendlove, 1967; Carlsmith, et al., 1973	Horowitz & Sedlacek, 1974
Use of follow-ups	Dillman, et al., 1974; Gleason & Huck, 1974; Anderson & Berdie, 1975; Sketh, 1975	
Mailing directly to the respondent	Rockman, 1973	
Promise of confidentiality or anonymity	Erdos, 1957a	Linsky & Spendlove, 1967; Fuller, 1974
Including or promising to send a premium or monetary incentive	Erdos, 1957b; Rockman, 1973; Carlsmith, et al., 1973; Gleason & Huck, 1974; Linsky, 1975	
Short questionnaires	Erdos, 1957a; Dillman, 1974	
Pre-coded (as opposed to open-ended) questions	Falzhik & Carroll, 1971	Linsky, 1975

Methodology

The population of the study was all teaching members of the staff of a large midwestern university in the colleges of education and liberal arts and sciences in the fall of 1975. All teaching faculty, including teaching assistants, were included. (These two colleges were selected since presumably the faculty therein are the chief users and recipients of questionnaires.) From this population, 150 subjects were selected randomly from eight randomly selected departments, 75 from each college.

In order to find the format preferred by the population, four different question formats were chosen for comparison: open-ended, Likert-type, checklist, and rank order. Items within each format were constructed to elicit the degree to which the various questionnaire characteristics (physical features, content, and administration) would influence return or non-return of a questionnaire. The Likert scale provided five response points from "strong influence to return" to "a strong influence NOT to return." On the rank order format, the subjects were asked to rank from five to eight factors with regard to their influence on return of a questionnaire.

Each subject received a packet of the four question formats and was asked to choose only one to complete and return. The forms were all on the same sized paper and were inserted into the envelope in random order. A period of two weeks was allowed for returning the completed questionnaire.

Results and Discussion

The response rates by type of questionnaire returned are presented in Table 2.

Table 2
RESPONSE RATES BY QUESTIONNAIRE TYPE

Type of Questionnaire Returned	Number Returned	Percent of 150	Percent of Number Returned
Checklist	22	14.7	40.7
Likert-type	17	11.3	31.5
Open-ended	14	9.3	25.9
Ranking	1	0.7	1.9
OVERALL	54	36.0	100.0

The 36% response rate is discouraging (to say the least), but since there was no follow-up used, and the questionnaires were sent out just before Thanksgiving break, the researchers were not too surprised, in retrospect. Performing a chi-square goodness of fit on the four types of questionnaires returned was highly significant ($\chi^2=17.9$, $df=3$, $p<.001$). If the questionnaire type using ranking were eliminated, there was no significant preference of questionnaire type using the Chi-square goodness of fit test. (It was decided to eliminate the one ranking questionnaire from further analysis for lack of a basis of comparison.) A discussion of the wording of the questions and the results will be presented for each questionnaire format separately. (The complete set of results for each item by format of questionnaire is presented in Appendix A.)

On the checklist questionnaire, after a general introduction of the purpose of the study, the respondents were asked to "check as many items as you think are important and that would influence whether or not you would return a questionnaire." For example, with respect to the physical appearance characteristics, the question was asked, "Which of the following physical appearance techniques would influence you to return a questionnaire?" The five most important factors influencing return of questionnaires (each factor was checked by 21 or more of the 22 respondents using the checklist format) were as follows: (1) research purpose is explained, (2) simple, clear directions, (3) stamped, self-addressed return envelope, (4) less than 4 pages, and (5) dealing with a topic you have experience with. Three of the factors that were checked least often (each by 2 or fewer respondents out of the 22) were: (1) promising a token reward for participation, (2) answering over the phone, (3) using machine-scorable answer sheets.

The checklist format questionnaire included the following question that did not appear as directly on the other formats: "Which of these areas of information would you hesitate to answer on a questionnaire?" The results of this question, including all areas listed, is given in Table 3.

Table 3
AREAS OF INFORMATION CAUSING HESITATION TO RESPOND

Areas of Information	Number Responding	% of Respondents (N=22)	% of Responses (N=41)
Age	0	0	0
Educational Status	0	0	0
Occupation & Position	0	0	0
Savings	14	64	34
Hobbies & Interests	0	0	0
Opinions	0	0	0
Marital Status	1	5	2
Name	2	9	5
Income	9	41	22
Number of Children	0	0	0
Personal Properties	10	45	24
Club Memberships	5	23	12

The questionnaire using Likert-type items asked, after a brief introduction, "To what extent would each of the following characteristics influence whether or not you would complete and return a questionnaire?" The respondents were asked to place an "X" in one of the columns headed "Strong Influence to Return," "Some Influence to Return," "No Influence," "Some Influence Not to Return," and "Strong Influence Not to Return." The characteristics that were chosen to have a strong or some influence by 16 or more of the 17 respondents using the Likert format were as follows: (1) Research purpose is explained, (2) Sincere, informal tone of letter, (3) simple, clear directions, (4) stamped, self-addressed return envelope,

(5) researcher personally known, and (6) answer directly on questionnaire. Three of the characteristics that were least likely to influence returns were: (1) use of colored paper, (2) use of token reward, and (3) mailing questionnaire to respondent's home.

Since responses to the open-ended items were dependent upon how the question is worded, the open-ended questions are given below:

In each of the general areas below, what specific factors, if any, do you think would influence you to complete a questionnaire and return it. Please don't feel restricted by the examples:

- (1) The physical appearance (for example, length, elegance, format)
- (2) The content of the questions (for example, items which are too personal, too much trouble)
- (3) Just who the researcher is (for example, his/her status, connections, affiliation, purposes)
- (4) The method of administering the survey (for example, by what means you receive the questionnaire, how you are expected to return it, any incentive received or promised).

The responses were categorized into one of those on the Likert or checklist formats. The most frequently mentioned characteristics were: (1) confidentiality, mentioned by 95% of the respondents, (2) less than 4 pages, 71%, (3) Research purpose is explained, 64%, (4) simple, clear directions, 57%.

When responses from all three types of questionnaires are combined, the most frequently cited factors influencing questionnaire returns were as follows (N=53): (1) Research purpose is explained, 91%, (2) Clear simple instructions, 87%, (3) Less than 4 pages, 83%, (4) Confidentiality is promised, 79%, (5) stamped, self-addressed return envelope, 79%.

Conclusions

The results indicate that a sample of presumably frequent questionnaire users, when placed in a position of respondent, favored a questionnaire having characteristics of clarity and brevity; having familiar, yet not-too-personal subject matter; and being convenient to administer and return. They wanted to know the purpose of the research, to be promised confidentiality, and to be informed of the results. The clear ways to insure non-response were to create questionnaires which were too long, too hard to fill out, too personal, had non-familiar subject matter, and were delivered at home with no stamped, self-addressed return envelope. Other factors mentioned in this study as techniques frequently manipulated by researchers seemed not to possess the power to effect a return rate that many studies have indicated (e.g., use of a token reward). The researchers were aware of the obvious limitations of a 36% return rate. In addition, the study should be replicated on a non-university population. However, the findings of the present study suggested that certain techniques could be useful in boosting return rate. Also, much information can be learned by asking questions directly rather than using inference from an indirect measurement.

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APPENDIX A
CHARACTERISTICS INFLUENCING QUESTIONNAIRE RETURN BY TYPE OF QUESTIONNAIRE

Characteristic	Checklist (N=22)		Likert (N=17)		Open (N=14)		Combined (N=53)	
	N	%	N	%	N	%	N	%
<u>PHYSICAL APPEARANCE</u>								
Typewritten pages	13	59	14	82	0	0	27	51
Printed pages	7	32	13	77	1	13	21	40
Smaller or larger (than 8-1/2 x 11)	10	46	5	29	0	0	15	28
Machine answer sheet	0	0	8	47	0	0	8	16
Colored paper	8	36	3	18	1	7	12	23
Less than 4 pages	21	96	13	77	10	71	44	83
Sponsoring organization on letterhead	12	55	14	82	0	0	26	49
Neat overall appearance	18	82	16	94	2	14	36	68
<u>CHARACTERISTICS OF INTRODUCTION LETTER</u>								
Research purpose is explained	22	100	17	100	9	64	48	91
Letter is addressed to you	18	82	6	35	1	7	25	47
Confidentiality is promised	14	64	15	88	13	93	42	79
Person to answer is specified	6	27	11	65	0	0	17	32
Sincere, informal tone of letter	11	50	17	100	0	0	28	53
Simple, clear directions	21	96	17	100	8	57	46	87
Token reward (e.g., coin) for participation	2	9	6	35	0	0	8	15
Research results promised	15	68	14	82	3	21	32	60
Topic you have experience with	21	96	11	65	0	0	32	60
<u>METHOD OF ADMINISTRATION</u>								
Questionnaire delivered to you personally	8	36	*	*	0	0	8	22
Stamped, self-addressed return envelope	21	96	17	100	4	29	42	79
Delivered by boss	1	5	6	35	0	0	7	13
Picked up by researcher	4	18	3	18	0	0	7	13
Mailed to your home	3	14	4	24	0	0	7	13
Mailed to your office	16	73	11	65	1	7	28	53
Answer over phone	1	5	7	41	0	0	8	15
Answer on questionnaire	17	77	16	94	0	0	33	62
<u>METHODS OF FOLLOW-UP</u>								
A second questionnaire	10	46	7	41	0	0	17	32
A telephone reminder	4	18	8	47	1	7	13	25
Small token gift with second questionnaire	3	14	5	29	0	0	8	15
A humorous reminder	12	55	10	59	0	0	22	42
<u>CHARACTERISTICS OF RESEARCHER</u>								
Works with respected person/organization	8	36	12	71	4	29	24	45
Located in your community	5	23	10	59	0	0	15	28
Located out of state	3	14	3	18	0	0	6	11
Personally known	14	64	17	100	0	0	31	58

* Item not on questionnaire