

The Effectiveness of Some Techniques for Improving Mail Survey Response Rates: A Meta-analysis

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This paper examines the effectiveness of several techniques for improving response rates to mail surveys: preliminary notification by letter or by telephone, and follow-ups using letters or postcards. The data was obtained from 15 articles published in business, psychology and sociology journals between 1960 and 1982. A meta-analysis of the data indicated that higher response rates were achieved when preliminary notification was given than when it was not, and a telephone call was a more effective form of preliminary notification than a letter. Higher response rates were achieved when a follow-up letter or postcard was sent as a reminder than when no follow-up was used, and a follow-up letter was more effective than a follow-up postcard. Whether a single follow-up reminder is more, or less, effective than a preliminary notification remains to be determined.

Keywords: mail survey response rates

Introduction

Mail surveys are used widely in marketing research for gathering a large quantity of information over a broad geographical area at a comparatively low cost. However, while some authors suggest that postal surveys should commonly yield response levels between 60% and 80% (e.g., Hoinville & Jowell 1978), response rates between 10% and 30% are not uncommon (Luck, Wales & Taylor 1970; Boyd & Westfall 1972). In their meta-analysis of 93 studies, Yu and Cooper (1983), report an average response rate of 47%.

Researchers have explored a wide range of techniques in their attempts to maximize response rates and reduce the possible non-response bias of mail surveys (Heberlein & Baumgartner 1978; Yu & Cooper 1983). These efforts to stimulate response rates may be employed at three different phases of a survey:

- i) Prior to mailing the questionnaire; using preliminary notification by telephone, letter, or postcard.
- ii) Coincidental with mailing the questionnaire; varying type of postage, questionnaire length, degree of personalization, inclusion of incentives, and nature of cover letter.
- iii) After mailing the questionnaire; using a follow-up letter, postcard or phone call.

The objectives of this study were to determine the effectiveness of two sets of techniques used to increase the response rates of mail surveys:

- i) Preliminary notification by mail and telephone.
- ii) Follow-up by letter and postcard.

Method

Data Sources

The data employed in the analyses were extracted from 15 studies uncovered by a literature search of the following sources:

- 1) Market Research Abstracts (1974-1988)
- 2) Business Periodicals (1958-1988)
- 3) Social Science Citation Index (1986-1988)
- 4) Newz Index (1979-1988)
- 5) Bibliography of Marketing Research Methods (1986).

Only studies reported since 1960 were selected, and only then if they included a control group as well as the experimental treatment. The actual studies involved in each analysis are indicated in the references by an asterisk. Some studies provided data for more than one of the analyses.

Analysis

Meta-analysis rests on the principle that the results of research based on the same independent variables can be combined to give an overview of the subject and a much greater perspective about the effects of the design elements being examined. This approach, used in this study, is described in detail by Francel (1966) and Yu and Cooper (1983).

The raw data from the studies was combined to produce a weighted average response rate for both control and experimental treatments. These were then compared using the independent two group Chi-square test.

The sample sizes for the 21 sets of response rates for both preliminary and follow-up methods ranged from 41 to 800. Since the response rate averages reported in the results are weighted by sample size, the larger samples contribute more weight to the average.

Results and Discussion

The results of the meta-analysis are summarised in Table 1. A requirement of meta-analysis is that the analyses only include studies that employed a control group. This requirement substantially reduced the database, and for some treatments, only one, two or three studies were uncovered. While a greater number of studies would have been preferable, the results are still valid and of interest.

Preliminary Notification

Preliminary notification by telephone or by letter is an effective way of substantially increasing response rates, a telephone call being more effective than a letter. Preliminary

telephone calls increased response rates by approximately 30%, while preliminary letters increased response rates by approximately 15%.

While this analysis illustrates the effectiveness of a preliminary telephone call, it must be remembered that this approach would substantially increase the cost of the research, and is not always practical. Obtaining the telephone numbers of businesses would be time-consuming, but not difficult. However, obtaining the telephone numbers of members of the general public would be both time-consuming and difficult, if not impossible, since not everyone has a telephone, and many who have are not listed in the directory.

There are also problems with the use of a preliminary letter, and its effectiveness may depend on the type of respondent targeted. Jobber and Sanderson (1982) achieved a lower response rate with a preliminary letter than with no preliminary letter, and suggest that a preliminary letter should not be used when surveying managers at work. Parsons and Medford (1972) also reported a negative effect when advance letters were used in their survey of a group of religious leaders, and found they had no significant effect on response rate in a survey involving male M.B.A. alumni. They suggest that advance notice is not necessary when the sample is drawn from a fairly homogeneous population.

Follow-up Methods

Both a follow-up postcard and a follow-up letter are an effective way to increase response rates, a letter being more effective than a postcard. A follow-up postcard increased response rate by approximately 15%, while a follow-up letter increased response rate by almost 30%.

Preliminary Notification vs Follow-up

None of the located studies compared the effectiveness of preliminary notification and follow-up methods. The data presented here suggests that the two approaches are equally effective, but this conclusion must be drawn with caution, since different sample populations were involved in the two treatments.

However, this conclusion would be consistent with that reached by Heberlein and Baumgartner (1978), who state that:

"advanced contacts are no more or less effective than follow-up contacts..."
(p453)

An alternative approach would be to employ both a preliminary and a follow-up technique, but this does not seem to be necessary. Kephart and Bressler (1958) tested the combined effect of a preliminary notification and follow-up letter, and concluded that the combined techniques were no more effective than the follow-up used alone.

Thus, faced with a choice, a researcher would probably be advised to employ a follow-up technique, preferably a follow-up letter, as this would involve substantially lower costs, since approximately 30% of the sample would have already responded.

Table 1. The effectiveness of various methods of improving response rates

	Response		Non-response		Total		X ²	p
	n	%	n	%	n	%		
Preliminary notification by telephone vs no preliminary notification (3)								
Telephone	513	67.7	245	32.3	758	100	310.08	**
No prelim. notif.	527	29.9	1230	70.1	1757	100		
Total	1040	41.4	1475	58.6	2515	100		
Preliminary notification by letter vs no preliminary notification (11)								
Letter	1373	40.1	2046	59.9	3419	100	28.67	**
No prelim. notif.	1340	34.1	2588	65.9	3928	100		
Total	2713	36.9	4634	63.1	7347	100		
Preliminary Telephone Call vs Preliminary Letter (1)								
Telephone	146	68.2	68	31.8	214	100	33.25	**
Letter	171	43.7	220	56.3	391	100		
Total	317	52.4	288	47.6	605	100		
Single Postcard Follow-up vs No Follow-up (2)								
Postcard	649	49.9	651	50.1	1300	100	88.95	**
No follow-up	595	33.1	1203	66.9	1798	100		
Total	1244	40.1	1854	59.9	3098	100		
Single Letter Follow-up vs No Follow-up (3)								
Letter	745	62.9	440	37.1	1185	100	244.70	**
No follow-up	799	35.0	1482	65.0	2281	100		
Total	1544	44.5	1922	55.5	3466	100		
Single Letter Follow-up vs Single Postcard Follow-up (1)								
Postcard	185	37.0	315	63.0	500	100	8.34	*
Letter	230	46.0	270	54.0	500	100		
Total	415	41.5	585	58.5	1000	100		

Notes: For all analyses, d.f. = 1; * = p < .01; ** = p < .005
Number of studies represented shown in parentheses.

Conclusions

The meta-analysis of published research data has shown that the use of either preliminary notification or follow-up techniques can substantially increase mail survey response rates, a

finding consistent with previous studies (Fox, Crask & Kim, 1988). Of the techniques examined, preliminary notification by advance telephone call was more effective than a preliminary letter, and a single follow-up letter was more effective than a single follow-up postcard. However, the question of whether a preliminary notification is more effective than a follow-up letter could not be examined as no published data were available.

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