DOCUMENT RESUME

ED 088 930 TM 003 490

AUTHOR Horowitz, Joseph L.; Sedlacek, William E.
TITLE Initial Returns on Mail Questionnaires: A Literature Review and Research Note.
INSTITUTION Maryland Univ., College Park. Counseling Center.
REPORT NO RR-10-73
PUB DATE [72]
NOTE 12p.

EDRS PRICE MF-$0.75 HC-$1.50
DESCRIPTORS Efficiency; Literature Reviews; *Methods Research; *Questionnaires; *Surveys
IDENTIFIERS *Mail Surveys

ABSTRACT

The effects of method of reproduction, status of researcher and personalization of signature on the initial rate of return of mail questionnaires were investigated, using a one-page combination cover letter and questionnaire mailed to 200 full professors, 200 associate professors and 200 assistant professors at the University of Maryland, College Park. The levels of each experimental variable were: Status (professor, graduate student); signature (hand signed in ink, mimiographed facsimile); reproduction (typed, photocopied, mimiographed). A response rate of 69% was obtained, without using any follow-up procedures. Chi square analyses indicated no significant differences in the rate of returns for the levels of any of the experimental variables. It appears that initial return rate will not be significantly affected by using the most efficient, least expensive method available. (Author)

COUNSELING CENTER

Office of Vice Chancellor for Student Affairs

UNIVERSITY OF MARYLAND

College Park, Maryland

COUNSELING CENTER
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND

INITIAL RETURNS ON MAIL QUESTIONNAIRES: A LITERATURE REVIEW AND RESEARCH NOTE

Joseph L. Horowitz and William E. Sedlacek

Research Report # 10-73

Portions of this report appeared in the M.A. Thesis of the senior author, "Effects of reproduction method, researcher status, and signature personalization on a questionnaire's initial return rate," University of Maryland, 1972.

COUNSELING CENTER
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND

INITIAL RETURNS ON MAIL QUESTIONNAIRES: A LITERATURE REVIEW AND RESEARCH NOTE

Joseph L. Horowitz and William E. Sedlacek

Research Report # 10-73

SUMMARY

The effects of method of reproduction, status of researcher and personalization of signature on the initial rate of return of mail questionnaires were investigated, using a one-page combination cover letter and questionnaire mailed to 200 full professors, 200 associate professors and 200 assistant professors at the University of Maryland, College Park. The levels of each experimental variable were: Status -- professor, graduate student; signature -- hand signed in ink, mimeographed facsimile; reproduction -- typed, photocopied, mimeographed.

A response rate of 69% was obtained, without using any follow-up procedures. Chi square analyses indicated no significant differences in the rate of returns for the levels of any of the experimental variables.

It appears that initial return rate will not be significantly affected by using the most efficient, least expensive method available.

The standard method of evaluation within educational circles is the survey (Arbuckle, 1953), with the most prevalent survey technique being the mail questionnaire (Parten, 1966). The mail questionnaire offers a number of advantages over other survey techniques, including cost (Sudman, 1967; Hochstim, 1967; Bachrack and Scoble, 1967), amount of time and energy required (Plog, 1963), convenience for the respondent (Eigelberner, 1926), surveying a broad geographical range of respondents (Clausen & Ford, 1947), and elimination of interviewer bias (Franzen and Lazarsfeld, 1945). However, despite these advantages, the mail questionnaire suffers from the problem of nonresponse. Mail questionnaires are based upon the principle that responses from a random sample of a population permit the researcher to draw valid inferences about the entire population. However, if only some of the random sample responds, their responses may not be representative of the entire sample, let alone the population. Nonrespondents have been observed to differ from respondents on a number of characteristics (Kawash & Aleamoni, 1971; Shuttleworth, 1941; Abeles, Iscoe and Brown, 1954; Bachrack and Scoble, 1967; Hochstim and Athanasopoulos, 1970; Franzen and Lazarsfeld, 1945).

The problems and biases caused by nonresponse lend themselves to some solutions. Obviously, the primary method to deal with nonresponses is to reduce the size of the nonrespondent group by maximizing responses. One of the methods to maximize response rate is to employ vigorous follow-up procedures (Abeles, et al., 1954; Edgerton, Britt and Norman, 1947; Scott, 1961). However, since followup procedures necessitate increased expenditures of time, money and energy, followups tend to work against some of the advantages of mail questionnaires.

Perhaps the ideal method to reduce nonresponse bias is to maximize the initial rate of return of the mailed questionnaire. The bulk of empirical research

designed to determine means to maximize the initial rate of return has centered around the contributions to response rate of various mechanical and perceptual devices (Linsky, 1965). Among the variables that have been studied in published research are: Offering incentives or rewards (Hancock, 1940); color of stationery (Gullahorn & Gullahorn, 1963); different classes of mail, and different types, denominations and colors of postage of either the return or outgoing envelope (Champion & Sear, 1969; Clausen and Ford, 1947; Martin & McConnell, 1970; Plog, 1963; Roeher, 1963; Scott, 1961); use of a post card reminder (Ferriss, 1961; Sletto, 1940); guarantees of anonymity (Mason, Dressel & Bain, 1961); use of a deadline date (Ferriss, 1951; Roeher, 1963); and length of questionnaire (Mason, et al., 1961; Sletto, 1940; Champion & Sear, 1969). Scott (1961) provides a comprehensive literature review on various means to reduce nonresponse. The research on those variables with direct bearing on the current study (types of signature, status of researcher, and type of reproduction) will be discussed in greater detail.

Survey research texts, as well as empirical research, support the idea that the cover letter should be both concise, personal and attractive (Hancock, 1940; Lundberg, 1929; Parten, 1966; Goode and Hatt, 1952). Odum & Jocher (1929) report that when the questionnaire has very few questions, the questionnaire is sometimes made part of the cover letter.

Research on the singature on the cover letter centers around varying the signature between a handwritten (ink) signature and a mimeographed facsimile. Linsky (1965) surveyed members of a state nurse's association, and found that handwritten signatures and salutations on the cover letter brought greater returns than did mimeographed signatures and salutations. Weilbacher & Walsh (1952) surveyed members of a Columbia University professional fraternity and found no significant differences on the return rate of cover letters with personal

signatures and non-personalized signatures. Kawash & Aleamoni (1971) examined the effects of personalized signatures in a survey of faculty members on audio-visual materials. They found no significant differences between the return rates of ink and mimeographed signatured cover letters. Clausen & Ford (1947), in a followup to a survey of veterans also found no differences between an ink signature and a mimeographed facsimile. Thus, despite statements in survey research texts, the use of ink signatures on the cover letter does not seem to guarantee higher response rates.

The effects of varying the status of researcher on the return rates has received virtually no empirical study. Roeher (1963) found that using a fictitious title brought in more returns than did the use of no title. Kawash & Aleamoni (1971) suggest that the status of the researcher may be a relevant variable influencing return rate, but could find no other research covering the effects of varying the status of the researcher on the return rate of mailed questionnaires.

The variable of the method of reporduction of the cover letter has produced conflicting research findings. Martin & McConnell (1970) found no significant differences in return rate between individually typed and mimeographed cover letters in a survey of attitudes toward crime and the legal system. In surveying motorcycle owners, Scott (1961) found no significant differences in the return rate of questionnaires with photocopied and mimeographed cover letters. However, Simon (1967) found that personally typed cover letters brought in more returns than did form letters, and Moore (1941) surveyed school superintendents and concluded that typewritten cover letters brought more returns than did duplicated letters. Panos and Rice (undated) surveyed college students and found that autotyped letters brought more returns than did mimeographed letters, but they did not portion out the personal - impersonal signature variable.

Despite the widely held view that a "personal touch" in the cover letter will increase the response rate of a mailed questionnaire, empirical research is often conflicting. Personalization of the signature on the cover letter, the status (title) of the researcher, and the personalization of the method of reproduction of the cover letter have never been studied simultaneously. The present study was an investigation of the effects of type of reproduction of the cover letter and questionnaire, type of signature on the cover letter, and status (title) of researcher on the initial rate of return of a mail questionnaire.

Method

A sample of 600 faculty members of the University of Maryland, College Park, was selected. Two hundred faculty members from each of the three professional ranks (Full, Associate and Assistant Professors) were sent an anonymous, one-page combination cover letter and five-item questionnaire. The 600 subjects (Ss) were randomly assigned to one of 10 treatment groups and each group had 60 Ss., 20 of each rank. The experimental variables were: Types of signature (ink or mimeographed facsimile); Types of reproduction (typed, photocopied or mimeographed); and Status of Researcher ("Professor of Educational Psychology" or "Graduate Student"). Forty percent of the 600 cover letters were mimeographed, 40% were photocopied, and 20% were produced on an IBM Selectric Magnetic Tape IV typewriter. One half of all cover letters were signed by a Professor of Education and Psychology and one-half were signed by a Graduate Student, each formally noting their title. Sixty percent of all cover letters were hand signed in ink (all that were typed plus one-half of those photocopied and mimeographed) with the researcher's name; 40% had a mimeographed facsimile signature. All cover letters signed in ink were personally signed by the professor and the graduate student rather than by assistants. Table 1 shows the design of the study, as well as the return rate for each treatment group.

The cover letter and questionnaire and a self-addressed postage-free envelope were sent in a typed envelope to each S, via campus mail, an internal, postage-free mail service for the campus. All questionnaires were mailed to the S's office; all returns were mailed to the University Counseling Center.

Data were analyzed using χ^2 at the .05 level.

Results and Discussion

The initial (i.e., pre-followup) return rate was 69% (N=412). Chi-square analyses between Returned and Not-Returned questionnaires, along the Status, Signature, Reproduction, Professional Rank and Treatment Group variables were performed, but none were significant at the .05 level.

A discriminant analysis for two groups was conducted, in an effort to discern which of the experimental variables best discriminated between the Ss who returned the questionnaire and those who did not return the questionnaire. Again the results showed no significant difference (F at .05).

Neither the status of the researcher, the method of reproduction, nor the type of signature resulted in significantly different return rates. Additionally, these nonsignificant differences held up for all three professional ranks. Hence, contrary to some survey textbooks and commonly held beliefs, the "personalization" dimension, as measured by the signature, status and reproduction variables seems to have little effect on the rate of return of a questionnaire mailed to college faculty members. The generalizability of these results to other populations with other content and length of questionnaires remains open to further empirical study.

Kawash and Aleamoni (1971) indicate that combinations of variables might possibly result in return rate differences, and they suggest the status of the researcher as potentially important as a variable. However, when signature personalization, status, and reproduction were studied in combination, none of these variables produced significantly different return rates in the present

study.

The significance of these findings lies in the fact that it no longer seems necessary to personally hand-sign cover letters, nor to have the signature of a prestigious official. Thus the advantages of the mail questionnaire, including cost, time and energy, could all be accentuated by using a mimeographed cover letter, with the facsimile signatue of, say, a graduate student. Since signature, status, and reproduction do not seem to be particularly relevant variables, perhaps such intangibles as the respondent's interest in the topic and mood when receiving the questionnaire are worthy of study. At any rate, it appears that at least for faculty members, the initial return rate will not be significantly affected by using the most efficient, least expensive method available.

Table 1.

Design of the Study and Initial Return Rate for Each Treatment Group

Treatment Group		Status	Signature	Reproduction	Return Rate	
Number	N*				N	%
1	60	Professor	Ink	Photo	42	70
2	60	Grad Stud.	Ink	Photo	43	72
3	60	Professor	Non-ink	Photo	46	77
4	60	Grad Stud.	Non-ink	Photo	41	68
5	60	Professor	Ink	Mimeo	40	67
6	60	Grad Stud.	Ink	Mimeo	40	67
7	60	Professor	Non-ink	Mimeo	37	62
8	60	Grad Stud.	Non-ink	Mimeo	35	58
9	60	Professor	Ink	Type	41	68
10	60	Grad Stud.	Ink	Type	47	78

*Each group had 60 Ss, 20 Full Professors, 20 Associate Professors and 20 Assistant Professors.

References

Abeles, N., Iscoe, I., & Brown, W.F. Some factors influencing the random sampling of college students. *Public Opinion Quarterly*, 1954, 18, 419-423.

Arbuckle, D.S. *Student personnel services in higher education*. New York: McGraw Hill, 1953.

Bachrack, S.D. and Scoble, H.M. Mail questionnaire efficiency: Controlled reduction of nonresponse. *Public Opinion Quarterly*, 1967, 31, 265-271.

Champion, D.J. and Sear, A.M. Questionnaire response rate: A methodological analysis. *Social Forces*, 1969, 47, 335-339.

Clausen, J.A., and Ford, R.N. Controlling bias in mail questionnaires. *Journal of the American Statistical Association*, 1947, 42, 497-511.

Edgerton, H.A., Britt, S.H., and Norman, R.D. Objective differences among various types of respondents to a mailed questionnaire. *American Sociological Review*, 1947, 12, 435-555.

Eigelberner, J. *The investigation of business problems*. New York: McGraw-Hill, 1926.

Ferriss, A.L. A note on stimulating response to questionnaires. *American Sociological Review*, 1951, 16, 247-249.

Franzen, R. and Lazarsfeld, P.F. Mail questionnaires as a research problem. *Journal of Psychology*, 1945, 20, 293-320.

Goode, W.J. and Hatt, P.K. *Methods in Social Research*. New York: McGraw-Hill, 1952.

Gullahorn, J.E. and Gullahorn, J.T. An investigation of the effects of three factors on response to maile questionnaires. *Public Opinion Quarterly*, 1963, 27, 294-296.

Hancock, J. An experimental study of four methods of measuring unit costs of obtaining attitude toward the retail store. *Journal of Applied Psychology*, 1940, 24, 213-230.

Hochstim, J.R. A critical comparison of three strategies of collecting data from households. *Journal of the American Statistical Association*, 1967, 62, 976-989.

Hochstim, J.R. and Athanasopoulos, D.A. Personal follow-up in a mail survey: Its contribution and its cost. *Public Opinion Quarterly*, 1970, 34, 69-81.

Kawash, M.B. and Aleamoni, L.M. Effect of personal signature on the initial rate of return of a mailed questionnaire. *Journal of Applied Psychology*, 1971, 55, 589-592.

Linsky, A.S. A factorial experiment in inducing responses to a mail questionnaire. *Sociology and Social Research*, 1965, 49, 183-189.

References (Continued) BEST COPY AVAILABLE

Lundberg, G.A. *Social Research: A study in methods of gathering data.* New York: Longman, Green and Co., 1929.

Martin, J.D., & McConnell, J.P. Mail questionnaire response induction: The effects of four variables on the response of a random sample to a difficult questionnaire. *Social Science Quarterly,* 1970, 51, 409-414.

Mason, W.S., Dressel, R.J., & Bain, R.K. An experimental study of factors affecting response to a mail survey of beginning teachers. *Public Opinion Quarterly,* 1961, 25, 296-299.

Moore, C.C. Increasing the returns from questionnaires. *Journal of Educational Research,* 1941, 35, 138-141.

Odum, H. W. and Jocher, K. *An introduction to social research.* New York: Henry Holt and Co., 1929.

Panos, R.J. and Rice, J.E. *An experimental analysis of different mail follow-up techniques within a national sample of hard-core non-respondents.* Washington, D.C.: Office of Research, American Council on Education, undated.

Parten, M. *Surveys, polls, and samples : Practical procedures.* New York: Cooper Square Publishers, 1966.

Plog, S.C. Explanations for a high return rate on a mail questionnaire. *Public Opinion Quarterly,* 1963, 27, 297-298.

Roeher, G.A. Effective tehcniques in increasing response to mailed questionnaires. *Public Opinion Quarterly,* 1963, 27, 297-298.

Scott, C. Research on mail surveys. *Journal of the Royal Statistical Society,* 1961, 124, 143-205 (Series A).

Shuttleworth, F.K. Sampling errors involved in incomplete returns to mail questionnaires. *Journal of Applied Psychology,* 1941, 25, 588-591.

Simon, R. Responses to personal and form letters in mail surveys. *Journal of Advertising Research,* 1967, 7, 28-30.

Sletto, R.F. Pretesting of questionnaires. *American Sociological Review,* 1940, 5, 193-200.

Sudman, S. *Reducing the cost of surveys.* Chicago: Aldine Publishing Co., 1967.

Weilbacher, W.M. and Walsh, H.R. Mail questionnaires and the personalized letter of transmittal. *Journal of Marketing,* 1952, 16, 331-336 (Part 1).