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ABSTRACT

Results of two studies, involving surveys of alumni of postsecondary institutions, are presented to assess the effect of format and typeface on mail survey response rates. The first study focused on the effect of booklet/folder format versus stapled sheets. The method of reproduction, page content, page size, and appearance of the questionnaires were identical. Subjects were 100 former students of the University of Tennessee. The second study involved use of: (1) a questionnaire version produced by a laser printer that allowed variation in type size; and (2) a version originally produced by a typewriter and photocopied. Subjects were 297 former students of the same university. In each study, each subject received only one of the two form types. Results of the studies are consistent with previous findings that when the same questions are used, there is no significant difference between questionnaires of different lengths, between questionnaires with a professional appearance (typeface) and those that are typed, and between booklet and stapled questionnaires. It is noted that, due to the narrowness of the subject scope of the studies, generalizations from these conclusions should be made cautiously. (TJH)

Effect of Booklet/Folder Questionnaire Format and Style of Type on Mail Survey Response Rates

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Introduction

Questionnaire appearance is particularly important in mail surveys because the instrument, along with the preliminary letter and/or cover letter, must sell itself and convince the recipient to complete and return it. Berdie, Anderson, and Niebuhr (1986) recommend that reproduction of all survey correspondence be done as professionally as possible, but they recognize that available funds sometimes place constraints on the alternatives open to the researcher. Manner of reproduction is one aspect of the questionnaire appearance. Type-set questionnaires were rated by Babbie (1973) as having the most professional quality, followed by those reproduced by photo-offset equipment. Questionnaires reproduced by mimeograph and ditto machines were the least professional in appearance. Disadvantages of having questionnaires type-set, however, were that the process took longer and was more costly than the other methods.

Dillman (1978) also emphasized consideration of printing method, as well as size and shape of the page, early in the development of a questionnaire. He stresses the importance of a professional appearance, achieved in part by use of a booklet construction (pages folded and stapled in the middle), reduced type (smaller than that of a standard typewriter), quality printing, and the use of the front page as a cover that contains a graphic illustration but no questions. Erdos (1970) perceived the booklet format as less personal and more economical than other formats.

Contemporary researchers usually have available to them the means of developing questionnaires with different font types and sizes that in the past were available only through professional type-setting. Computers with laser printers can generate professional-appearing original or master copies of the questionnaires. Equipment is available that can duplicate (using a photocopy or xerox-type method) questionnaires on legal-size paper, fold and saddle stitch the pages, making this a convenient size and format for questionnaires. For paper of larger size, photographic plates can be made and used as the basis for reproducing hundreds of copies through photo-offset printing.

While choices regarding questionnaire format and construction must still be made in light of existing resources, there is greater availability of alternatives than in the past, and often with less price difference, so that impact on response rate can be given more weight in making such decisions. Little research has been conducted in recent years to test the effect of the use of modern resources on response rate, but the results of studies on the impact of print quality, format, length, and appearance on response rate could, for the most part, be summarized as finding no differences. Researchers found no significant differences in response rates between letterpress or offset printed questionnaires and those in which typed copy was duplicated by either mimeograph or ditto machines (Ford 1968; Scott, 1961), between offset-printed questionnaires and computer-generated questionnaires (Hesseldenz & Smith, 1977), or between computer-generated and typed questionnaires (Heller, Rife, & Lussier, 1988). In comparing formats, Ford found no significant difference between printed questionnaires in booklet style consisting of four 8 1/2" by 11" pages and questionnaires mimeographed as single 8 1/2" by 14" sheets with items on one-side only and stapled together. Marks and Maulden (1950) found little difference in returns between a four-page, 9" by 11" booklet accompanied by supplementary sheets, and a single, large (18" by 24") sheet.

Because smaller type sizes are available when generating a questionnaire on a computer than is possible on a standard typewriter without reducing the finished copy, the finished computer-generated questionnaire might well appear to be shorter in length than the typed, unreduced version containing the same questions. The appearance of increased length may be due to more pages (of the same size), printing on only one side of the page, or the use of larger pages. Questionnaire length does not appear to affect response rates when the same items are used and at least one follow-up attempt is made (Champion & Sear, 1969; Childers & Ferrell, 1979; Ford, 1968; Rucker & Arbaugh, 1979). Questionnaires consisting of a single sheet with questions on front and back had a higher response rate than those of two sheets with questions on only one side, but the difference was not significant (Childers & Ferrell). Some studies have found higher initial return rates for the longer appearing questionnaires (Champion & Sear, Rucker & Arbaugh), but

there were no significa t differences at the conclusion of the studies. Scott (1961) found a small (1.2%) but statistically significant difference in response rates favoring two-page, when compared with one-page, questionnaires at the conclusion of the study.

None of the previous studies on either type of reproduction, booklet format, or length were done in educational settings, although survey data collection methods are used frequently in educational research (Fuqua, Hartman, & Brown, 1982). The circumstances in which mail surveys are conducted vary considerably, and there is growing awareness that techniques that are successful in one area of survey research (such as marketing studies of consumers) may not automatically generalize to other populations or types of research.

This paper presents the results of two separate studies, both conducted in surveys of alumni of a postsecondary institution. Because of financial considerations, it is important to determine the most economical, yet efficient, means of achieving high response rates. Increased availability of computers and laser printers has made it possible and economically feasible to design professional-looking instruments with varying type fonts and sizes that were previously not considered. Variations in construction (paper size and booklet format) are also more readily available than in the past. The following questions were addressed in this research:

1. Does questionnaire format (booklet/folder construction versus single sheets with questions on one side only that are stapled together) influence the response rate in educational surv' 's?
2. Does a professional appearance (computer-generated professional type fonts, booklet format with a logo on the cover page, and smaller page size) affect the response rate in educational surveys?

Overview

The first study was more controlled and focused on the effect on response rate of booklet/folder format versus stapled sheets. Method of reproduction, page content, page size and appearance of the two questionnaires were identical. One version of the questionnaire was

constructed as a folder or booklet, using a single 11" by 17" sheet with questions on both sides and folded in the middle, while the second questionnaire version was identical except that it was reproduced on four separate 8 1/2" by 11" sheets of paper, with questions on only one side, that were stapled together.

The second study was more complex but also controlled for questionnaire content and method of reproduction. The professional or booklet questionnaire version was developed on a computer with a laser printer, utilized varying type sizes and a professional type font, and was constructed as a booklet with a logo on the front cover on 8 1/2" by 14" paper that was folded and stapled in the middle; the other questionnaire version was prepared using a typewriter to develop the master copy and was reproduced on one side only of 8 1/2" by 11" sheets of paper that were stapled together. Because the questions were identical while the paper sizes, type sizes, and construction differed, the lengths of the two instruments also varied. Space was available in the booklet questionnaire for inclusion of a teacher certification code list needed to answer some of the questions; a supplemental code sheet accompanied the stapled version but was to be discarded after use rather than returned with the questionnaire. The differences between groups could be summarized as follows:

Folder/Booklet/Professional	Stapled/Typed
Differences Common to Both Studies	
Folder or booklet format	Stapled single sheets
Items on both sides of sheet	Items on one side only
Additional Differences in Second Study	
Page size 7" by 8 1/2"	Page size 8 1/2" by 11"
Length of 6 pages	Length of 4 2/3 pages
Certification codes in booklet	Additional sheet needed for codes
Varying type sizes	Same size type throughout
Professional type font	Standard prestige elite type
Cover page with logo	No cover page or logo

Study Number One

Procedures

This research took place within the context of a long-range follow-up of graduates of teacher preparation programs at The University of Tennessee. One hundred former students were selected to represent each of three cohorts: former students who had completed their programs approximately three, five or seven years previously and could (if they had entered the profession upon graduation) have been completing their third, fifth, or seventh years of teaching. A list of graduates from the College of Education for each of the three cohort years was obtained from the Alumni office on campus (reputed to have the most up-to-date addresses for former students). Students who had been part of the random samples to participate in annual follow-up surveys in the year following their graduation and in subsequent surveys at two-year intervals were included in the sample of 100 for this study if valid mailing addresses were available through the alumni records. Two names were randomly deleted from those in the three-year cohort to achieve the sample of 100. For the other two cohorts, additional names (alumni who had not participated in the previous studies) were randomly selected to bring the totals to 100 each.

A four-page questionnaire was developed to obtain the following information: employment history, career plans, attitude toward the teaching profession, teaching experiences and perceptions, current teaching situation, and evaluation of the teacher preparation program. Items contained structured response options or called for one-word responses. There were no open-ended items except the invitation for comments at the end of the instrument. A maximum of 42 responses (plus comments) would be needed to complete the instrument if an individual were currently teaching. If the individual were not teaching, fewer responses would be needed.

The master copy of the questionnaire was developed on a Macintosh computer in Times font (10 point type for questions) using a laser printer. Questionnaires were photocopied on ivory-colored paper. Half of the questionnaires were photocopied on one 11" by 17" paper (front and back) and folded to create a folder with four pages of questions. The other half of the

questionnaires were photocopied as four separate 8 1/2" by 11" sheets with questions on one side only that were stapled together in the upper left corner.

In each sample of 100, student names were listed alphabetically within six groups according to their of preparation (art and music education, health and physical education, technological and adult education, special education, elementary and early childhood education, and secondary education). Using a split-sample approach, individuals were systematically assigned to receive either the folder or stapled questionnaire, with every other name receiving the folder version.

The questionnaires were mailed in mid-March and were followed at two-week intervals by postcard reminders and then by second follow-ups that contained another copy of the questionnaire. Because of difficulty obtaining the folder-type forms for the second follow-up mailing, some individuals who were originally sent folder questionnaires received stapled questionnaires on the second follow-up. Results are therefore valid only until the second follow-up was mailed.

Completed questionnaires were received from 68 members of the seven-year cohort, 64 each from the other two cohorts. Three names were deleted from the seven-year cohort, seven from the five-year cohort, and one from the three-year cohort because they were unreachable. (All correspondence was returned as undeliverable.) Final return rates were 70% for the seven-year cohort, 69% for the five-year cohort, and 65% for the three-year cohort. Chi-square comparisons were used to compare response rates of the two questionnaire versions for each cohort after the first and second mailings. A .01 level of significance was used for each analysis.

Results

Response rates for each cohort for the first (questionnaire) and second (postcard follow-up) waves are shown in Table 1. Response rates varied from 51% to 65% by the time the second follow-up was mailed. Response patterns were the same after the initial and second mailings, with the same version showing a higher response rate at both times. There was inconsistency, however, in that higher response rates were recorded for the folder format for the three- and five-

year cohorts, but the reverse was true for the seven-year cohort. Using a .01 level of significance, chi-square analyses showed no significant differences in initial return rate or after one follow-up for any of the three cohorts.

Table 1

Response Rate After First and Second Waves of Mailing for Booklet and Stapled Questionnaires

	N		Return Rate							
			First Wave				Second Wave			
	Folder	Stapled	Folder		Stapled		Folder		Stapled	
Group			n	%	n	%	n	%	n	%
Three year	49	50	25	51.0%	18	36.0%	32	65.3%	26	52.0%
Five year	46	47	18	39.1%	17	36.2%	27	58.7%	24	51.1%
Seven year	48	49	20	41.7%	21	42.9%	27	56.3%	29	59.2%

Study Number Two

Procedures

The second study was a follow-up of students who had completed teacher preparation programs at the same institution as in the first study during the previous year (September through August). A total of 297 former students were identified.

A questionnaire was developed to obtain information about the former student's employment, job satisfaction, career plans regarding teaching, and evaluation of the teacher preparation program, in addition to basic demographic information. Two open-ended items were included along with structured items that could have involved a maximum of 55 responses if the individual were employed as a public or private school teacher.

Half of the questionnaires (professional or booklet format) were developed on a Macintosh computer using a Times laser font and varying font sizes. Ten point type was used for questions and response options. Items were formatted to fit 7" by 8 1/2" pages and photocopied on 8 1/2"

by 14" (legal-size) sheets of paper that were folded and stapled in the middle to form a booklet. The front cover of the booklet contained survey title information and the institution logo. This questionnaire required two sheets of 11" by 17" paper with printing on both sides of the page resulting in an 8-page instrument that included one page listing teacher certification codes (needed for responding to some items).

The other half of the questionnaires (typed) contained identical items but were produced on a letter-quality Daisywheel printer with a type similar to prestige elite found on standard typewriters. Items were formatted for 8 1/2" by 11" pages. The survey title was typed at the top of page one, and there was no formal cover page or logo. The items required 4 2/3 pages (one side only) in this format. A separate sheet listing teacher certification codes (was included but was not to be returned. All questionnaires were photocopied on ivory-colored paper.

Names of the former students were listed in alphabetic order within six subgroups by area of preparation and were systematically assigned (on an alternating basis) to receive either the professional or the typed questionnaire in a split-sample approach. A preliminary letter was mailed to each former student in mid-March. One week later, the questionnaire and return envelope were mailed. Three subsequent mailings at two-week intervals included a postcard follow-up, a letter and a second copy of the questionnaire, and a final follow-up letter. Six names were removed from the list when they proved to be untraceable, leaving 291.potential respondents. A total of 225 completed questionnaires were received by the termination of the study, and two additional questionnaires were received later for a final response rate of 78%. Returns were monitored on a daily basis throughout the survey. Return rates for the professional and typed questionnaire formats after each wave were compared using chi-square analyses and a .01 level of significance.

Results

At the conclusion of the study, response rates of 76% and 79% were obtained, but the differences between return rates for the professional and typed versions were not significant at any stage of the survey. The return rate for the professional version exceeded that for the typed version after each of the first three mailings, but this changed after the fourth and final mailing, as shown

in Table 2. At no stage did the difference in return rates between versions exceed the peak of 3.2% found after the third mailing.

Table 2

Response Rate After Each Wave of Mailing for Professional and Typed Questionnaires

	Questionnaire Type			
	Professional n=145		Typed n=146	
Mailing	n	%	n	%
First wave	60	41.4%	57	39.0%
Second wave	80	55.2%	77	52.7%
Third wave	102	70.3%	98	67.1%
Fourth wave (through two weeks after mailing of final reminder)	110.	75.9%	115	78.8%

Discussion

Results of the two studies cannot be combined. Taken independently, however, they may provide some answers. The first case, with its greater control, showed no difference in response rate between folder or booklet type construction and separate sheets stapled in the corner (printing on front only) when the content and page size were identical. There were four pages of questions, and whether they appeared only on one side of the page for four pages or on front and back of two joined sheets did not substantially influence whether or not the individual completed and returned the questionnaires. Greater differences in response rates were observed for the more recent graduates (three-year cohort), favoring the folder construction, than for the earlier graduates.

The results of the second study showed even smaller differences in response rates than the first study but may reflect an interaction in which the effects of some questionnaire characteristics counteract others. The two questionnaire versions in the second study varied in several ways, whereas differences in the first study were only in folder versus stapled construction and single

side duplication versus front and back. In the second study, instead of having pages that appeared to be the same size, the finished page size of the booklet was 7" by 8 1/2" while the typed version was 8 1/2" by 11". There was a cover page including the university logo on the booklet but not on the typed version. Although not precisely following Dillman's (1978) suggestions, the booklet questionnaire incorporated many of them that were missing from the typed version, leading to the belief that the more professional appearing booklet version would produce a higher response rate. This was not found after any of the four waves.

Results of these two studies are consistent with previous findings that when the same questions are used, there is no significant difference between questionnaires of different lengths, between questionnaires with a professional appearance (regarding type) and those that are typed, and between booklet and stapled questionnaires. Although utilization of a folder or booklet construction and computer-generated original for the questionnaire did not produce a higher response rate in either study, neither did these techniques result in lower response rates. In effect, it does not matter, in terms of response rate, which approach is used in educational research. There are other reasons, however, for using particular techniques. The computer-generation of the original copy of the questionnaire allows the researcher to fit more onto a page by using a type size smaller than standard typewriter size. In some cases, the finished size of the questionnaire is reduced and can result in lower postage for mailing out and/or for return postage. While typed copy can be reduced when it is photocopied, formatting the copy to be reduced so that it fits the page size is frequently more time-consuming than when reduced type is used initially in composing the instrument on a computer. Computer-generation of copy also permits variations in type sizes and offers styles of type similar to those available for type-set copy that providing a more professional-looking questionnaire. A booklet or folder is reportedly easier for a data entry person to handle than single sheets stapled in the corner because there is less page turning, but this has not been thoroughly studied. The more professional questionnaire may be perceived as a more desirable representative of the sponsoring agency or group than the more simplistic typed one.

A questionnaire is designed to obtain specific the information. The choice of paper size and format may vary from one survey effort to another because of the number and type of items, so that an individual may not use the same format for each survey that he or she conducts; similarly, studies with the same focus but conducted by different organizations may well have different spatial needs. In research, the researcher is usually seeking results that will generalize, and frequently attempts to extend the applicability of findings too far. The two studies reported in this paper were conducted by an institution in contacting former students. Generalization beyond that type of situation should be tentative at best, although it is tempting because the results are consistent with those found in other settings, particularly the most recent study by Heller, Rife, and Lussier (1988). Researchers are eager to find significant differences, but it is also important to learn that there are no significant differences between two conditions, as occurred in these two studies. Additional carefully controlled studies isolating specific elements of the professional design are, however, in order.

References

Babbie, E. R. (1973). Survey Research Methods. Belmont, CA: Wadsworth

Berdie, D. R., Anderson, J. F., & Niebuhr, M. A. (1986). Questionnaires: Design and Use. Metuchen, N.J.: Scarecrow Press, Inc.

Champion, D. J., & & Sear, A. M. (1969, March). Questionnaire response rate: A methodological analysis. Social Forces, 47(3), 335-339.

Childers, T. L., & Ferrell, C. C. (1979, August). Response rates and perceived questionnaire length in mail surveys. Journal of Marketing Research, 16(3), 429-431.

Dillman, D.A. (1978). Mail and Telephone Surveys: The Total Design Method. New York: John Wiley & Sons.

Erdos, [illegible] (1970). Professional Mail Surveys. New York: McGraw-Hill.

Ford, N. (1968). Questionnaire appearance and response rates in mail surveys. Journal of Advertising Research, 8(3), 43-45

Fuqua, D. R., Hartman, B. W., & Brown, D. F. (1982). Survey research in higher education. Research in Higher Education, 17(1), 69-80.

Heller, E. S., Rife, F. N., & Lussier, R. F. (1988, April). Questionnaire response scales: Design factors that influence respondent satisfaction. Paper presented at the meeting of the American Educational Research Association, Washington, D.C.

Hesseldenz, J. S., & Smith, B. S. (1977). Computer-prepared questionnaires and grouping theories: Considerations for mail surveys in academic settings. Research in Higher Education, 6, 85-94.

Marks, E. S. & Maulden, W. P. (1950). Response errors in census research. Journal of the American Statistical Association, 45, 424-438.

Rucker, M. H., & Arbaugh, J. E. (1979, Fall). A comparison of matrix questionnaires with standard questionnaires. Educational and Psychological Measurement, 39(3), 637-643.

Scott, C. (1961). Research on mail surveys. Journal of the Royal Statistical Society. Series H (General), 124(2), 143-205.