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ABSTRACT

Although the mail survey has been widely criticized as a viable research methodology, it remains the most feasible approach for retrieving data from large, widely-dispersed populations. This paper suggests that there exists a readily accessible body of pragmatic recommendations which, if adhered to throughout the instrument design and data collection phases, may dramatically increase response rates where mail surveys are employed. The paper employs a content analysis of three recent studies of diverse higher education topics. Each achieved a high rate of return from dissimilar respondent groups located in divergent geographical locations. (Author)

The Much-Maligned Mail Survey Reexamined: A Comparative Analysis of Procedures and Techniques to Increase Response Rates

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Abstract

Although the mail survey has been widely criticized as a viable research methodology, it remains the most feasible approach for retrieving data from large, widely dispersed populations. This paper suggests that there exists a readily accessible body of pragmatic recommendations which, if adhered to throughout the instrument design and data collection phases, may dramatically increase response rates where mail surveys are employed. The paper employs a content analysis of three recent studies of diverse higher education topics. Each achieved a high rate of return from dissimilar respondent groups located in divergent geographical locations.

The Much-Maligned Mail Survey Reexamined: A Comparative Analysis of Procedures and Techniques to Increase Response Rates

The mail survey has often been the design of choice for gathering research data in education. It has many advantages. It is relatively inexpensive, fairly easy to organize, can assure anonymity (Pride, 1979), and it can be used with relative ease by novice researchers as well as seasoned professionals.

The mail survey is particularly useful in obtaining data from distant populations. It can reach people who are too busy to be interviewed (Pride) and target sub-groupings of respondents. It can be used to gather data quickly on a broad variety of research problems and its format is conducive to framing responses in a manner suitable for appropriate statistical analysis. Additionally, the mail survey instrument lends itself well to obtaining reliability coefficients through test-retest procedures and it meets acceptable standards of content validity when analyzed by expert reviewers. It can also ". . .eliminate interviewer bias to questions that are sensitive or embarassing when posed by an interviewer" (Pride, p.59).

Despite the fact that the mail survey is, in many cases, the most feasible approach for retrieving data from large, widely dispersed samples, many researchers have expressed concern about its

methodological validity. This concern is based largely on the grounds of seriously deficient response rates. Kerlinger's (1973) comments are typical:

> The mail questionnaire . . . has been popular in education, although it has serious drawbacks unless it is used in conjunction with other techniques. Two of these defects are possible lack of response and the inability to check the responses given. These defects, especially the first [italics added], are serious enough to make the mail questionnaire worse than useless, except in highly sophisticated hands. Responses to mail questionnaires are generally poor. Returns of less than 40 or 50 percent are common. Higher percentages are rare. At best, the researcher must content himself with returns as low as 50 or 60 percent. (p. 414)

In a similar vein, Erdos (1970) has also observed, "The most common flaw [in the mail survey approach] is nonresponse of a size or nature which makes the answers nonrepresentative of the total sample and thus the total universe" (p. 142).

Because of nonresponse bias, limitations on the nature of data which can be obtained through mail surveys, and the quality of responses obtained as well as other issues, "social scientists have viewed them as having little worth" (Dillman, 1978). As Kerlinger (1973) has suggested, the general opinion among

experienced researchers has been "not to use mail questionnaires if a better method can possibly be used" (p. 414).

Yet the mail survey will probably continue to be employed in a variety of research settings in education, though ideally in tandem with other techniques. Its popularity as a data gathering device seems firmly entrenched in the field of educational research: it certainly continues to be widely used in dissertation research. A general review of the current literature (e.g. from papers presented at educational conferences to journal articles and research reported in publications such as Change, The Chronicle of Higher Education, and the Educational Record) indicates that the methodology also remains popular among seasoned researchers.

Thus, while the warnings of experienced researchers concerning the historical weaknesses of mail survey methodology should be heeded, efforts must be made to inform inexperienced researchers and seasoned scientists alike that readily accessible and practical procedures exist which can increase significiantly response rates to mail surveys and make them more efficient research tools. For as Erdos (1970) has advised: "By far, the best way of reducing bias which nonresponse may create is to reduce the percentage of nonresponse to the lowest possible level" (p. 149).

Erdos has also noted that "the Advertising Research

Foundation recommends an 80 percent or better response on mail surveys . . . but for most purposes it may not be essential to reach this high degree of representativeness" (p. 144). He pointed out that, while 50 percent response may represent a minimum to be considered reliable, no level of response is automatically sufficient:

> The acceptability of the response has to be judged in each case by the nature of the survey and the goals and standards which the researcher sets or should set for a particular piece of research. (p.145)

Limited scope of recommended procedures

Although much information about individual procedures and techniques which are useful for increasing response rate in mail surveys is scattered throughout the literature, little in the way of a coordinated, planned sequence of procedures has been offered. When researchers attend to the inclusion of procedures to increase response rate, they often do so using incomplete, poorly integrated techniques which are only partially effective. And, although research on mail surveys has spawned a large number of methodological articles--well over 200 with more added each year--they have not provided adequate guidelines to the practitioner (Dillman, 1978).

The disarray and inconclusiveness of the many attempts to isolate and understand the impact of mail survey techniques on

increasing response rates was highlighted at the end of a review of the literature on the topic conducted by Kanuk and Berenson (1975). As a result of their review the authors noted that, despite the proliferation of research studies reporting techniques designed to improve response rate, "there is no strong empirical evidence favoring any techniques other than the follow-up and the use of monetary incentives" (p. 451).

The work of Erdos (1970), Pride (1979) and Dillman (1978) are notable exceptions. Each author attempted to offer suggestions to improve response rates from the perspective of addressing the entire mail survey process. Erdos' work, however, is oriented primarily to market researchers. His presentation lacks the conceptual framework, social science orientation, and the extensive attention to detail required by educational researchers. Pride's article is based largely upon his experience directing the National Geographic Society's readership surveys. His contributions--while similar to Dillman's (e.g., regard for the respondent, concern for the entire mail survey process)--are also deficient in detail and ready applicability. In contrast, Dillman's recommendations offer a fully integrated, planned sequence of procedures and techniques that are designed to increase the response rates to mail surveys in ways which are fully adaptable to research problems in education.

Although there may be general awareness of Dillman's TDM in some of the social and behavioral science fields, there is little

indication that there is widespread awareness of his techniques among educational researchers. One notable recent exception is Moore's (1981) national study of the career patterns of college and university administrators. Relying largely upon Dillman's TDM, a 73 percent response rate to a mail survey was achieved from among a sample of over 4,000 individuals (Moore, p.6).

Research on mail survey procedures

As has been noted, there is general agreement that mail survey techniques have limitations, predominately the biasing effects of nonrespondent motivation (Erdos, 1970; Dillman, 1978; Gallup, 1944; Hesseldenz, 1976; Kerlinger, 1973; Linsky, 1975; Parten, 1950). Nevertheless, market researchers have used the methodology successfully for many years (Blankenship, 1943; Hoinville and Jowell, 1978), and it has been suggested within the higher education community that marketing techniques should also be applied to a variety of issues (e.g. such as redefinition of missions, institutional advancement) that universities are facing currently (Yarrington, 1980; Fram, 1982). Indeed, many universities use mail survey techniques for this purpose today (Biggs, 1977; Owings, 1981).

A variety of individual techniques studied. Although mail surveys are also used extensively in the social sciences (Dillman, 1978), and some research on increasing response rate has emanated from these fields, most of the research on increasing response

rates is to be found in the marketing literature (Dillman; Pride, 1979). Journals such as Public Opinion Quarterly, Journal of Marketing Research, Journal of Advertising Research, and Market Research are rich sources of information on various techniques for stimulating mail survey response.

An incredible number of topics have been studied in an effort to improve mail survey response rates. Among the many cited by Dillman (1978) are: advance notification by letter or telephone, the use of white or off-white stationery, airmail versus certified delivery, stamp denomination, the inclusion of stamped return envelopes, questionnaire length and layout, official sponsorship of surveys, personalization, adding the sender's title, anonymity and confidentiality, cover letter composition, offers of incentives (to include money, trading stamps, lottery tickets, survey results, instant coffee, pencils, tie clips and note pads), enclosure of incentive (versus promise), and type and timing of follow-ups. In citing the literature review reported by Kanuk and Berenson (1975), Dillman concluded "exhaustive reviews of the available literature . . . seemed destined to be unhelpful" (p. 7).

Since the publication of Dillman's work studies have continued to appear in the educational literature which have focused on only one or two techniques at a time. The relationship between questionnaire length and response rate (Adams and Gale, 1982), feedback as an incentive for increasing mail survey response

(Powers and Alderman, 1982) and the effect of including questionnaires with follow-up letters (Futrell and Lamb, 1981) are but a few examples. Although Dillman (1978) admitted that such research "provides a rich source of ideas about techniques that in some way may be woven together to form an effective method" (p. 9), he pointed out that past research "does not provide us with a concept of respondent behavior that can guide efforts to construct an effective methodology" (p. 9).

Dillman's Total Design Method. Recognizing this situation, Dillman (1978) formulated the Total Design Method (TDM), a procedure and variety of techniques which he contends will increase greatly mail survey response. The TDM attempts to present mail surveys in such a way that respondents develop proprietary attitudes toward the research project in which they are being asked to participate. The literature on the use of the TDM, however, is extremely limited. Dillman, himself, has observed that "there has not been sufficient use of the TDM or experimentation to determine whether the results obtained are the best possible" (p.33).

The method "is guided by a theoretical view about why people respond to questionnaires" (Dillman, 1978, p. 12) which is based on the tenets of motivational psychology, most notably developed by Homans, Blau and Thibaut and Kelley (cited in Dillman, p. 12). Dillman has postulated that the process of sending a questionnaire, getting respondents to complete it in an honest matter, and return

it, is a special case of social exchange:

> people engage in any activity because of the rewards they hope to reap, . . . all activities they perform incur certain costs, and . . . people attempt to keep their costs below the rewards they expect to receive. (p. 12)

He concluded that there are three conditions which must be met to maximize survey response: "minimize the costs for responding, maximize the rewards for doing so, and establish trust that those rewards will be delivered" (p. 12).

Dillman's conceptualization of why people respond to surveys is intended to guide the researcher through the first step of the TDM: "to identify each aspect of the survey process that may affect either the quality or quantity of response and to shape each of them in such a way that the best possible responses are obtained" (p. 12). It is during this first step where strategies are applied to minimize cost to the respondent, maximize rewards, and establish trust.

The second step of the TDM is the development of an administrative plan to organize the survey so that the design intentions are carried out fully. Dillman (1978) has claimed that the "failure of surveys to produce satisfactory results occurs as often from poor administration as from poor design" (p. 12). His theme is attention to the most minute details. He noted, "the TDM is as much a carefully orchestrated set of sequential events as

specific principles of design" (p. 20).

One of Dillman's major contributions which separates him from the majority of researchers who have addressed the topic is providing a frame of reference against which the design aspects of each mail survey research problem may be considered. The TDM is thus an exploratory effort to bring together the many fragments of earlier research into an integrated whole whereby the planning, administration and implementation of mail surveys are guided by a concern for the respondent's motivations.

Strategies suggested by the Total Design Method. Dillman included within his TDM a rather rigid and quite detailed set of procedures and techniques. These include sample cover and follow-up letters, a specific timetable, a carefully described questionnaire style and production guide, a prescribed testing process and schedule, and instructions on assembling the mailout package. His choices about which strategies to include in the TDM were guided by the implications of the social exchange theory which he suggested address respondent behavior. As a general representation of the many individual procedures and techniques which are implied by TDM, Dillman (1978) offered the following summary of strategy categories:

1. Reward the respondent by:

   showing positive regard

   giving verbal appreciation

using a consultative approach

supporting his or her values

offering tangible rewards

making the questionnaire interesting

2. Reduce costs to the respondent by:

making the task appear brief

reducing the physical and mental effort that is required

eliminating chances for embarrassment

eliminating any implication of subordination

eliminating any direct monetary cost

3. Establish trust by:

providing a token of appreciation in advance

identifying with a known organization that has legitimacy

building on other exchange relationships (p. 18)

While the TDM is a specific and somewhat rigid method, it is also useful as a general guide to mail survey design. As noted earlier, "the TDM is as much a theory of response behavior . . . as it is a proven way of getting good response. The TDM [as described in his book] is by no means a final product" (Dillman, p. 19).

Purpose and rationale

The purpose of the present study was to determine the degree of congruence of the three studies with the TDM method. It was

believed that a high degree of congruence would offer tentative validation of Dillman's procedures. It was further hypothesized that a comparative analysis of the degree of adherence of the data collection strategies of the three studies to TDM, given the differences among response rates obtained, might also provide tentative evidence about how critical total adherence to TDM is to optimizing response rates.

METHOD

The present study reports the results of a content analysis of the mail survey methodologies employed in three recent studies of diverse higher education topics. Each achieved a high rate of return from among dissimilar respondent groups located in divergent geographical locations. The three studies had varied budgetary and time constraints. In each case, the studies used Dillman or Dillman-like procedures to varying degrees of completeness and under different conditions. They represent three cases in which TDM strategies were field-tested under differing conditions for the purpose of gathering data to address diverse research issues.

Data sources

Study A, The Relative Importance of Selected College and University Presidential Roles as Perceived by Chairpersons of Boards of Trustees and Presidents in Pennsylvania (Cote, 1983), was conducted between February and April of 1983. Data were gathered from presidents and board chairpersons (n = 258) from 129

Pennsylvania postsecondary institutions: virtually all comparable institutions licensed to grant degrees in Pennsylvania.

Study B, An Identification of Effective Renewal Strategies for Small Private Liberal Arts Colleges (Grinnell, 1983), was conducted during March and April of 1983. Data were gathered from administrators, faculty, trustees and "significant others" (n = 274) nominated for participation in the study by the presidents of a national sample of 19 postsecondary institutions which had undergone renewal.

Study C, An Analysis of the Attitudes of Mediating Influentials Toward the Public Universities of Kansas (Tompkins, 1983), was conducted during March, 1983. The data were gathered from ministers, bankers, political county chairman and university faculty (n = 1197) from across the state of Kansas.

Content analysis

Content analysis is a method used in basic research to relate open-ended data to theoretical positions. The researcher systematically peruses the messages under consideration to determine underlying dimensions within the data (Hammond and Tompkins, 1983). Holsti (1969) has defined it as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 14). Education has made relatively little use of the technique (Kerlinger, 1973).

Despite a diversity of definitions of the method, there is

general agreement that content analysis includes the requirements of: (1) objectivity--each step in the research process be carried out on the basis of explicitly formulated rules and procedures; (2) system--the inclusion and exclusion of contents or categories is done according to rules applied consistently; (3) generality--the findings must have theoretical relevance (Holsti, 1969). Although the method is held in low esteem is some quarters, its use is rising (Holsti).

One issue associated with use of the method has been qualitative versus quantitative applications of it. With regard to this methodological issue, Holsti has suggested that "the content analyst should use qualitative and quantitative methods to supplement each other" (p. 11).

Procedure

In this study, the frequency and degree to which each of the three studies employed specific Dillman or Dillman-like procedures and techniques were examined through a content analysis of the study reports and mail survey materials used. Consistent with Dillman's emphasis on the overall tone of the survey material and concept of respondent motivation, an attempt was made to also assess the degree to which each study represented methodology principles inherent to the TDM.

The focus for the content analysis was the three major TDM strategy categories noted previously-- rewarding the respondent,

reducing costs to the respondent and establishing trust--as well as the fourth area of adherence to an administrative plan, considered here to be a strategy catagory. Each procedure and technique to increase response rate which was employed in the studies was identified and classified within one of the four strategy categories. The enumeration unit was a single discrete strategy. There were several exceptions made, however, in the case of the follow-ups: the first follow-up (reminder postcard) was counted as three; the second follow-up (letter, second questionnaire, return envelope) was also weighted as three; the third follow-up (more strongly worded letter, questionnaire, stamped return envelope, sent certified mail) was weighted as four. The weighting of the follow-up strategies reflects the impact on increasing response rate generally agreed to be associated with all follow-up procedures (Dillman, 1978; Kanuk and Berenson,1975; Linsky, 1975) and the greater overall intensity associated with using certified mail for the final follow-up (Dillman).

Table 1 provides a summary of the discrete strategies suggested by Dillman (1978) grouped within the four major strategy catagories. Although a full representation of TDM recommendations and implications as they were applied to the three studies examined here is beyond the scope of this paper, the strategies summarized in Table 1 should provide other investigators with sufficient information to enable replication of this study.

Reliability and validity

When employing content analysis, "reliability is a function of the coders' skill, insight, and experience, clarity of categories and coding rules which guide their use; and the degree of ambiguity in the data" (Holsti, 1969, p. 135). In this study the categories of strategies and coding rules employed were based on the TDM.

Holsti has noted that "content validity . . . has most frequently been relied upon by content analysts" (p. 143). In this study validity was addressed through the informed judgement of the investigators: we believe the strategies identified are indeed strategies intended to increase response rate.

The reliability has been inhanced by using the simple appearance of the strategies in the study reports and related documents as the enumeration unit. The three investigators also reviewed separately the array of identified strategies and the frequency with which they occurred in the methodologies of the three studies.

RESULTS

Study A: a case of near complete adherence to the TDM

Study A represents an example of near total adherence to the procedures and techniques included in the TDM. As indicated in Table 1, the number of individual strategies employed in study A was greater than the number employed by each of the other two studies in every category. The data indicate that study A also employed a

significantly greater total number of strategies than did studies B or C and further suggest there was little difference between the total number of strategies employed by B or C.

Insert Table 1 about here

In addition to employing more individual procedures and techniques within a TDM framework than did the other studies, study A in many cases went beyond TDM in its use of duplicative reinforcing strategies. For example, Dillman recommends that the researcher establish trust with his/her respondents by identifying with a known organization that has legitimacy. Each of the three studies did this through use of university letterheads in correspondence with respondents. Study B also employed a letter sent by the president of a national association known to and respected by the respondent groups. Study A--through a variety of techniques--indicated support or sponsorship by four organizations, each known to have a strong relationship with a particular subgroup of the sample.

The variety of approaches employed by study A also represents an example of the flexibility Dillman claims to be inherent to the TDM principles: while certainly constituting a specific method, TDM may also be used as guide for innovation and adaptation to specific research problems. For example, study A went beyond TDM

recommendations in its use of the return address shown on envelopes used during data collection. Although not a specific TDM recommendation, a rubber stamp was developed using only the researcher's initials, last name, no title, and the phrase "Presidential Roles Survey." It was believed that this additional strategy contributed to subordinating the researcher to the respondent. It also was intended to strengthen the "official" image of the survey materials (e.g. thus establishing legitimacy).

The extent to which each strategy or each technique contributed to increasing response rate is, of course, unknown but the adoption of Dillman's basic principle of paying attention to even the most minute aspects of the entire survey process seems to have been adhered to most closely in the case of study A.

Studies B and C

Although study B included only one follow-up procedure (indicated by the lower figure shown in Table 1 in the "administrative plan" category), it enjoyed a very acceptable response rate of 77 percent. The population sample was similar to that of study A: both A and B represented rather homogeneous respondent groups as compared to study C. The relatively high response rate to study B after only one follow-up seems, like study A, to support Dillman's claim that responses to TDM surveys of 80 to 90 percent "are not unusual for more specialized groups" (p. 27).

A review of the difference between the "scores" shown for

studies A and B in the "administrative plan" catagory (i.e. 18,8) in light of the two reported response rates (i.e. 91,77 percent) suggests that, in the case of study B, had TDM procedures been adhered to more closely in at least that catagory, a higher response rate may have been obtained. The very low score of 2 for study C in the same catagory coupled with its relatively high reported response rate suggest it too may have obtained greater response with additional follow-up strategies. Although the comparative impact of strategies to increase response rates is not revealed by the treatment of the data reported here, the pattern of the response rates and the literature which has reported the importance of follow-up procedures imply that greater attention to them may result in higher response rates.

Although the mail survey methodology employed by study B departed from TDM procedures in a number of instances, it apparently addressed each of the four strategy categories with sufficient success to allow the investigator in that case to abort other follow-up procedures. Study B also illustrates the value of Erdos' (1970) recommendations: it relied most heavily on those rather than the TDM.

Study C offers an interesting example of the success of TDM procedures even though it was limited severely by budget and time for data collection and follow-up procedures. Although one follow-up procedure was employed (a reminder postcard mailed five

days after the original mailout), its impact was probably negligible given the seventh day response cut-off. The questionnaire design and cover letter followed closely Dillman's recommendations (as indicated by the score of 17 in the "reward respondent" category of Table 1). The 62 percent response rate obtained from a fairly heterogeneous population seems somewhat remarkable given the single week of data collection.

Summary

Dillman (1978) has suggested that the major need in the development of TDM implementation processes is "to build a set of complementary techniques that together would produce a high quantity and quality of response" (p. 161) rather than finding individual techniques to solve particular problems (e.g. such as using a variety of techniques to encourage people to simply open the envelope). He has suggested that the weakness of past research is due to its overemphasis on incremental analysis of only one or two aspects of a data collection process, when in fact that process depends on the total impression created with the prospective respondent. Following elaboration of a conceptual framework intended to address respondent motivation, his efforts in developing TDM "focused on designing an implementation system that is consistent with the usual aim of social research, and not on producing a collage of gimmicks" (p. 161).

The comparative analysis of these three studies suggests that

strict adherence to an integrated approach, such as Dillman's TDM, holds the possibility of yielding high response rates to mail surveys--even among respondent groups suspected to be difficult to survey successfully. Attention to the many details of questionnaire and cover letter design as well as the full spectrum of administrative detail associated with data collection seems critical. Further studies of TDM surveys are needed to explore in greater detail and with increased rigor the performance of the method in the field.

Implications for practice

To continue employing questionnaires and other mail survey materials which lack the results of attention to the use of strategies designed to take advantage of hypothesized features of respondent motivation when well-confirmed, integrated techniques and procedures are readily accessible seems inappropriate. If the mail survey is selected as the most appropriate method for data retrieval--or at least one component of a multi-faceted approach to data collection--then significant attention should be given to the many aspects of the data collection process. Such attention would appear to have a good chance of increasing response rates significantly, thus addressing and remedying the major historical weakness of the mail survey methodology: nonresponse bias.

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Table 1

Summary of Content Analysis Results

Strategies suggested by TDM	Study A(91,8)[a]	Study B(77,5)	Study C(62,1)
Reward respondent	19	13	17
Show positive regard			
Stress respondent's contributions	X	X	X
Individually typed, signed letters	X	X	X
Personal postscripts, tone of second letter text	X		
Fold initial mailout in prescribed manner	X		X
Give verbal appreciation	X	X	X
Consulting approach in letter, instrument tone	X	X	X
Support respondent's values in letter text	X		X
Offer tangible rewards	X	X	X
Make questionnaire interesting			
Establish vertical flow	X	X	X
Clear directions for response	X	X	X

Table 1 (continued)

Strategies suggested by TDM	Study A(91,8)	Study B(77,5)	Study C(62,1)
Questions/upper, responses/lower case	X	X	
Booklet format	X	X	X
Questions in interior only	X		X
White or off-white paper	X	X	X
Attention to first question			X
Questions on left, responses right	X	X	
Questions arranged in catagories		X	
Conversational tone	X		X
Attention to front cover design	X	X	X
Attention to rear cover design	X		X
Open-ended response opportunity	X		X
Reduce costs	15	12	11
Make task appear brief			
Reduce booklet size	X		X
Length of booklet<11 pgs., 125 items	X	X	X
Short response time highlighted in letters	X	X	X

Table 1(continued)

Strategies suggested by TDM	Study A(91,8)	B(77,5)	C(62,1)
Short response time highlighted in questionnaire	X		
Reduce physical/mental effort required			
Enclose return envelope	X	X	X
Clear questions	X	X	X
Simple questions	X	X	X
Easy to read questions	X	X	
Response behavior not complex	X	X	X
Questionnaire layout attractive, uncluttered	X	X	
Embarrassment eliminated (assure confidentiality)	X	X	X
Eliminate respondent subordination			
Letter tone subordinates researcher	X	X	X
Researcher's name de-emphasized (questionnaire)	X	X	X

Table 1(continued)

Strategies suggested by TDM	Study A(91,8)	B(77,5)	C(62,1)
Researcher's name de-emphasized (return envelope)	X		
Eliminate direct monetary cost	X	X	X
Establish trust	13	6	5
Token of appreciation provided in advance			
Stamp on return envelope	X	X	X
Offer of results summary	X	X	X
Identify with known organization[b]	XXXX	XX	X
Affiliations highlighted on questionnaire	X		
Letterhead highlights affiliations	X	X	X
Affiliations highlighted in letter text	X		
Telephone number highlighted	X		X
Use letters from known organization	X	X	

Table 1(continued)

Strategies suggested by TDM	Study A(91,8)	B(77,5)	C(62,1)
Build on other exchange relationships[b]	XX		
Adhere to administrative plan	18	8	2
Follow-up of initial mailout[c]			
First (postcard)	XXX		[d]
Second (letter, questionnaire)	XXX	XXX	
Third (certified mail letter, questionnaire)	XXXX		
Adherence to TDM follow-up schedule[e]	XXX	X	
Pretest			
Full scale pilot study conducted	X		
Pretested among similar respondents	X	X	X
Questions reviewed by colleagues	X	X	X
Carefully select mailout date			
Mailed on Monday or Tuesday	X	X	

Table 1(continued)

Strategies suggested by TDM	Study A(91,8)	Study B(77,5)	Study C(62,1)
Special conflicts with respondents' schedules addressed	X	X	
Total strategies employed	65	39	35

[a]Numbers in parentheses indicate response rates and number of weeks during which data was gathered, respectively.

[b]Each separate affiliation with a known organization and each separate instance of building on other exchange relationships valued at one.

[c]First two follow-ups valued at three each; third follow-up valued at four.

[d]TDM-type postcard employed in study C but data gathering terminated before the follow-up could affect the response rate reported here.

[e]Value of one assigned to each follow-up procedure adhering to TDM schedule.