IMPROVING ALUMNI SURVEY RESPONSE RATES: An Experiment and Cost-Benefit Analysis

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Mail surveys are frequently used in higher education research as a means of collecting data relevant for college decision makers. Despite their prevalence, mail surveys have drawbacks, chief among them the potential for low response rates, which may compromise the credibility of research results and diminish their usefulness. Therefore, it is important for institutional researchers to plan and conduct mail surveys that achieve optimal response rates, especially in populations (i.e., alumni) where low response rates may be a problem. This research tested the effect of the survey procedures suggested by Dillman's (1978) Total Design Method on response rate to a mail survey of two-year college alumni. The method used was an experiment with four groups that varied in their degree of adherence to Dillman's procedures, i.e., amount of follow-up and degree of personalized approach. Subjects were randomly assigned to groups. Results provided a test of Dillman's techniques in an educational setting, further information for institutional researchers about ways to improve response rates, and an analysis of the costs and benefits of using Dillman's methods.

Mail surveys are frequently used in higher education research to collect data relevant for assessing perceived quality of the institution, identifying new programs and services, measuring student outcomes, and targeting potential alumni donors (Ewell, 1983; Power and Alderman, 1982). Graduates and former students are valuable sources from which the above types of data may be collected. Often institutions wish to contact all alumni rather than just a sample, especially when a purpose of the project is to update alumni files. A mail survey is generally the only research method feasible for such large scale projects. However, mail surveys have drawbacks.

One of the most important problems posed by mail surveys is low rates of response. These undermine even the most worthwhile and elegantly designed questionnaire by compromising the representativeness and generalizability of

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the results, and therefore their usefulness to decision makers. Leslie (1970) writes that the credibility of survey research is largely a function of response rate. Berdie and Anderson (1974) concur, arguing further that unless a high rate of response is achieved study results cannot be assumed to be representative.

Because of the potential for low response rates, the effect on the quality of results obtained and hence on decisions based upon these results, it is important for researchers to plan and conduct mail surveys to achieve optimal response rates. Processes for conducting mail surveys are typically designed by relying on experience, available resources (staff, money, and time), and common sense. Researchers rarely have the luxury to experiment with diverse mail survey processes in order to identify which ones provide maximum response rates within acceptable limits of money, time, and effort.

The purpose of this research was to test the effect of different mail survey procedures on response rates and to determine the strategies that are most effective in improving rates of response in student follow-up/alumni surveys. An additional outcome of the research was an analysis of the costs of varying methods believed to improve response versus the actual gains in rate of response.

BACKGROUND

Alumni comprise the population most frequently asked to respond to surveys from colleges and universities. Kuh et al. (1986), in an extensive review of the research in higher education, find that the single most researched topic between 1969 and 1983 was student attitudes, including reports of satisfaction. However, alumni can be a difficult group from which to obtain responses to surveys. By definition, alumni surveys involve individuals who may not have had significant contact with the college for a number of years. The issue of obtaining valid current addresses aside, encouraging the response of persons who may have a decreased sense of affiliation with the college, feel they have "nothing to contribute" given the length of time they have been away, or have unclear memories of the institution, may be difficult. Therefore, developing strategies for encouraging alumni to complete and return surveys is particularly challenging.

The nonresponse problem may be especially troublesome for two-year schools, whose students frequently have even less feeling of connection to the institution than their counterparts at four-year colleges and universities. Indeed, many alumni of two-year institutions transfer or leave higher education before earning an associate's degree. Those who transfer and earn a baccalaureate degree typically consider themselves alumni of the institution from which they earned that degree, rather than alumni of the community college.

One proposed solution to the problem of low response rate is offered by Dillman's (1978) Total Design Method (TDM). Dillman's method combines

extensive follow-up with personal appeals to the respondent, appeals intended to validate his or her sense of expertise and contribution to the survey. The TDM offers researchers an integrated survey process designed to maximize response rates.

Dillman bases his recommendations about personal appeals on Homans' (1961) social exchange theory, which emphasizes the importance of increasing personal payoffs while reducing the costs of responding. One of the ways payoffs may be increased is through the use of symbols indicating the importance of the respondent to the survey project, e.g., hand signed cover letters, use of first class postage, and individually typed envelopes. Costs of responding can be reduced by making response easy. This can be accomplished by using such strategies as including a stamped return envelope; making the survey easy-to-read and easy-to-follow; and providing clear instructions for completion. Dillman points out that any of these strategies used individually may not have the impact of their use in combination.

Another component of Dillman's method is persistent follow-up. Rather than a "seat of the pants" approach to survey distribution and follow-up, Dillman recommends a predetermined schedule of mailings. According to this schedule, the initial mailing should be sent at the beginning of the week, and the first follow-up (a postcard) one week later. Subsequent mailings, according to Dillman, should include a cover letter, replacement survey, and return envelope. The second follow-up should be sent three weeks after the initial mailing (two weeks after the first follow-up). Dillman recommends sending the third follow-up by certified mail, seven weeks after the initial mailing and four weeks after the last follow-up. The general thrust of this approach, then, is to gradually increase levels of "pressure" on the respondent.

There has been relatively little research in higher education to substantiate the validity and effectiveness of Dillman's method. Cote, Grinnell, and Tompkins (1986) reviewed three studies that adhered to a greater or lesser extent to Dillman's procedures. The populations surveyed comprised exceptional, well-educated, highly motivated respondents. The researchers found that response rates varied depending on the degree of adherence to Dillman's procedures, although all were well above average, between 62% and 91%. However, the results they report may not be readily applicable to general populations of alumni.

Although not testing Dillman's method specifically, a few other researchers have reported findings that support his main tenets. Boser (1987), in a survey of teacher preparation programs that conducted alumni follow-ups found a relationship between response rate and number of contacts with graduates, and response rate and several variables related to personalization. Similarly, Hogan (1985) found that response rates to a survey of community college alumni improved when standardized follow-up procedures were employed.

In sum, limited evidence exists in higher education research substantiating the efficacy of Dillman's methods, and even less research has addressed the issue of the costs of adhering to the TDM process. Although Dillman promises good results if all techniques are used in combination, the strategies he suggests are expensive. The extensive follow-up suggested by the Total Design Method results in extra expense due to postage, printing costs for duplicate surveys, and additional staff time. If Dillman's methods are followed precisely, the fourth mailing is sent by certified mail and includes an additional survey—a substantial cost. In an era of tightening budgets it seems prudent not only to investigate whether strategies for improving survey response are effective, but to assess how costly they will be.

METHOD

Subjects

The population surveyed consisted of two sets of community college alumni who had completed at least 45 credits in a baccalaureate-transfer program. One set had last attended the college in the academic year 1982–83, and the other had last attended in 1984–85.

Procedure

The study reported here was an experiment to assess differing response rates to a mail survey in which two variables were manipulated: amount of follow-up and extent of personal appeal. There were two levels for each variable. Amount of follow-up was either one follow-up mailing or two follow-up mailings, and extent of personal appeal was either what researchers called the "warm approach" (i.e., much personalization) or the "regular" approach (i.e., little personalization). The combination of these two variables (2×2) produced four groups: Group 1—warm approach with two follow-ups; Group 2—warm approach with one follow-up; Group 3—regular approach with two follow-ups; and Group 4—regular approach with one follow-up.

Each subject was randomly assigned to a group. Because two sets of alumni were involved, there were actually eight groups if year of graduation/departure is considered. Since no response rate differences by alumni year were found, year is not considered a relevant variable. The content of all letters and the questionnaire itself, which was presented in the booklet form recommended by Dillman, was standard across all groups.

The two "warm" groups received letters that were individually produced on a word processor, had a personal salutation "Dear Ann"), were hand-signed by the president of the college and mailed in envelopes that had typewritten

addresses rather than labels, and had postage paid return envelopes stamped "Alumni Survey." Their follow-up postcard reminders were hand-written and addressed on postcards which featured a color picture of the college at sunset. Commemorative stamps were used.

The other two, or "regular," groups received "Dear Former Student" form letters with xeroxed signatures. Letters and questionnaires were mailed in envelopes with computer printed address labels and contained standard business reply envelopes without the personalized "Alumni Survey" stamp. Their follow-up postcard reminders were printed on plain white card stock with a preprinted mailing label and were bulk-mailed.

The amount of follow-up varied from one to two follow-up mailings, and the *types* of follow-up mailings varied as well. All groups received an initial follow-up postcard, with the level of personalization varying as described above. Groups with one follow-up (Groups 2 and 4) received only this reminder postcard. Dillman's suggested schedule of follow-up mailings was adhered to, with these first follow-ups sent one week after the initial survey mailing.

Two groups (Groups 1 and 3) received a second follow-up (i.e., letter and survey), which were mailed three weeks after the initial mailing. Again, the "warm" group (Group 1) received the personalized letters, envelopes with commemorative stamps, etc., described above. The "regular" group (Group 3) received impersonal letters and envelopes.

Researchers departed from the Dillman (1978) method by not sending a third follow-up by certified mail because of cost. Instead, a research service firm was hired to conduct telephone interviews with a number of students in the original population surveyed, relying on the students to indicate whether they had already responded by mail. Response rates reported in this study were calculated excluding these telephone replies.

A total of 1,027 surveys were mailed initially. Of those, 171 were returned by the post office for a revised total of 856. Three hundred and sixty-seven responses were received, for an overall response rate of 43%.

RESULTS

Results of this study are based on an analysis of the response rates for the four different groups. Group 1, which employed both a warm approach and two follow-ups, yielded the highest rate of response (53%), while Group 3, with extensive follow-up but a regular approach, had a response rate of 50%. Group 2, with a warm approach and one follow-up, achieved a response rate of 41% while Group 4, with a regular approach and only one follow-up, achieved a response of 30%. Though none of the response rates are as high as desired or as Dillman indicates they might be, they do reveal that the amount of follow-up

has the greatest impact on response. The group with two follow-ups but a regular approach achieved a rate of response only 3% lower than that of the group with the same number of follow-ups and a warm approach, while the group with a warm approach and only one follow-up had a response rate 12% lower (see Table 1).

Because mail surveys are relatively expensive, especially when first class postage and multiple follow-ups are employed, it is important that researchers know the relative effect on response rates of methods that are more or less costly. Therefore, the relative costs and benefits of each approach were also assessed.

Costs were defined as money spent on postage, purchase of envelopes, letterhead, and picture postcards; printing of letters, surveys, and postcards; and staff time expended to prepare materials for mailing. Basic costs of the initial mailing were higher by 60 cents per survey for the warm approach because of the increased handling time necessary to personalize the survey. In terms of cost for the follow-ups, the amount of follow-up raised financial costs to a greater extent than did the extent of personal appeals. For the first follow-up, the basic cost per post card for the regular approach was roughly 20 cents. This includes the cost of printing, postage, and staff time. For the warm approach, the cost more than tripled to 73 cents per post card because of the cost of the postcard itself (i.e., picture postcard versus plain cardstock) and staff time for affixing stamps and handwriting the cards. The second follow-up mailing, because of the inclusion of an extra survey, a postage-paid envelope, and a letter cost an additional $1.70 for each person surveyed. The cost of personalizing the second mailing (to Group 1) added approximately 37 cents for staff time per survey, which raised the total cost to $2.17.

Group 1, with extended follow-up and personal appeals, was the most costly ($5.27/per survey). Costs were high largely because of the staff time required to personalize the mailings. Preparation time, and therefore cost, was somewhat less for the second follow-up than the initial mailing because the word processing files (containing students' names, addresses, and individual salutations) used to create personalized letters were already in existence. Group 3 cut costs substantially by limiting the amount of personal appeals while retaining the follow-up (3.59/per survey), yet generated a response rate only 3% lower than that of Group 1 see Table 2).

TABLE 1. Response Rate: Type of Approach and Amount of Follow-Up

	Warm Approach	*Regular Approach*
Two Follow-Ups	Group One 53%	Group Three 50%
One Follow-Up	Group Two 41%	Group Four 30%

TABLE 2. Cost of Survey Mailings by Type of Approach

	Initial Mailing	First Follow-Up	Second Follow-Up
Warm Approach	$2.37	73¢[a]	$2.17[a]
Total Cost[b]		$3.10	$5.27
Regular Approach	$1.70	20¢[a]	$1.70[a]
Total Cost[b]		$1.90	$3.59

[a] Cost of follow-up.
[b] Total cost = initial mailing + follow-up(s).

DISCUSSION

Results confirm, to some extent, Dillman's assertions about the importance of making respondents feel a vital part of the survey process by including symbols that stress the importance of the respondent to the researcher. A no less important part of this process is the reduction of costs to the respondent for taking part in the survey by making the questionnaire easy to read and complete and by providing a return envelope. All respondents in this survey project received a moderate level of this approach, since the researchers reasoned that it was proper, ethical research practice to design an easy to follow survey, include an appropriate cover letter (endorsed by the president) and a return envelope.

What were varied, though still an integral part of Dillman's approach, were what the researchers initially considered to be more peripheral factors—such as hand-signed, personally addressed letters, and the use of commemorative stamps. Although Dillman suggests that these factors increase the respondents' feelings of importance and motivate them to participate, in this study they did not appear to play as large a role in inspiring response as did persistent follow-up. It might be argued that what was manipulated in terms of personal appeals was too small to generate much significance, but that does not take away from the powerful effect of follow-up. Perhaps one of the most compelling results of this research is the fact that groups with similar levels of follow-up, but different approaches, yielded very similar rates of response, while a group with one follow-up and a warm approach (i.e., high level of personal appeal) lagged behind in response by more than 10%. Apparently, the warmth of the approach could not compensate for the lack of follow-up. This does support one of Dillman's tenets, that an integrated approach must be followed if optimal results are to be achieved.

Results of an analysis of the costs of the research also reveal that decreasing the amount of personalization slightly can reduce costs substantially without much of a drop in the rate of response. However, limiting the number of

follow-ups has a significant negative effect on response rates but a less marked effect on costs.

Taken together, these results suggest that an integrated approach combining personal appeals with a well organized follow-up will produce the highest level of response. If cost is an issue, follow-up should not be sacrificed. A minimum of two follow-ups should be conducted. The most cost effective follow-up schedule is to send a postcard first, then a letter and survey. This way, provided the postcard generates response and the respondents' names are known, the letter and survey can be sent to a smaller number of persons.

As colleges and universities strive to assess the perceptions about and value of their programs and services, alumni surveys will continue to grow in importance as a major vehicle for obtaining data and information pertinent to these concerns. Planning and implementing alumni surveys that produce adequate response rates for research purposes and that make judicious use of financial and staff resources will undoubtedly continue to be a crucial component of researchers' jobs. Determining survey approaches that provide optimal response rates within resource constraints is, then, more than a heuristic exercise; it is an important investigation to assure high quality research.

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