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AUTHOR Miller, Margaret M.
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ABSTRACT

Educational researchers find mail questionnaires a convenient and relatively inexpensive way to conduct a survey, but response rate remains a crucial issue. This research examines the effects of two manipulated variables, the appeal of the introductory letter and a nonmonetary incentive, on survey response rate. Gender was also used as an explanatory variable. Subjects were full-time professors. The instrument addressed faculty attitudes about the importance of scholarly activities. The nonmonetary incentive was a decaffeinated coffee bag. Cover letter appeal was more personal in the experimental letter than in the control letter. Of the 950 deliverable surveys, 422 subjects responded to the initial mailing, with 552 subjects eventually responding after 2 followup postcard reminders. The hypothesis that nonmonetary incentives increase response rate was supported; incentives increased the initial response rate slightly, at 8.8% for those receiving the coffee. There was no significant effect of the cover letter appeal or of gender. Benefits of the small increase in initial response must be weighed against the increased cost of conducting the survey. Two tables present survey findings. (Contains 17 references.) (SLD)

The Effects of Cover Letter Appeal and Nonmonetary Incentive on University Professors' Response to a Mail Survey

Margaret M. Miller

University of Denver

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Educational researchers utilize mail questionnaires since they are convenient and relatively inexpensive compared to interviews or ethnographic research. In addition, a greater number of subjects may be obtained using survey research, thereby facilitating the estimation of population parameters from sample statistics. Response rate remains a crucial issue if randomness of the sample is to be maintained. An inadequate response rate may introduce bias into the results of the research. The purpose of this research was to examine the effects of two manipulated variables, introductory appeal letter and a nonmonetary incentive, on response rate. Gender was also used as an explanatory variable.

Questionnaires are utilized often in research regarding college faculty (Yuker, 1984). National faculty surveys report response rates ranging from 36% to 62% (Braxton, 1983; Gray, Froh, & Diamond, 1992; McGee & Ford, 1987). These response rates are considered typical for national faculty surveys (Locke, Fitzpatrick, & White, 1983), but it is desirable to increase these response rates to maintain sample representation. Small monetary incentives (twenty-five cents to one dollar) have been found increase response rates in the general population (Brennan, 1992; Gajraj, Faria & Dickinson, 1988; Goyder, 1982; Yammarino, Skinner & Childers, 1991). Nonmonetary incentives have not been investigated as a means to increase response rate.

The effects of varying cover letter appeals have been previously investigated with contradictory results (Green, Jacobi, Lam, Boser & Hall, 1993). Appeals that have been manipulated include social utility of responses (utility) and benefits to the sponsor (sponsor). A social utility appeal stresses

the importance of response to the betterment of society whereas a sponsor appeal emphasizes importance in aiding the sender. Results of appeal research have been mixed. Studies have found a positive significant effect of social utility over sponsor appeal (Jones & Linda, 1978); a negative effect of social utility versus sponsor appeal (Biner, 1988; Childers, Pride, & Ferrell, 1980); and no significant effect of appeal type (Linsky, 1965).

Research regarding gender differences in response rates is mixed. Goyder (1982) indicates that males respond more frequently than females. Green and Stager (1986) report that males respond to an initial mailing at a significantly higher rate. Female teachers tend to respond at a significantly higher rate than male teachers (Green, Jacobi, Lam, Boser & Hall, 1993). Yet, Green and Kvidahl (1989) suggest that males and females do not differ in response frequency.

The purpose of this research was to test the following hypotheses:

1. response rates are significantly higher if a nonmonetary incentive is offered than if no incentive is offered;

2. social utility appeal will significantly increase response rate above sponsor appeal;

3. females and males will significantly differ in response rate.

Method

Subjects were 1,000 full-time professors at doctorate-granting or comprehensive universities. One hundred institutions were selected using a stratified random sampling technique. The two stratification variables were institutional type (public or private) and Carnegie classification: Doctorate-

Granting I, Doctorate-Granting II, Comprehensive I, and Comprehensive II. College catalogs provided the population list. The sample was stratified by gender (equal representation from males and females), department (equal representation from eight departmental categories), and rank (assistant professor, associate professors, and full professor in a ratio of 4:3:3).

The five page, 104 item instrument addressed faculty attitudes about the personal importance of scholarly activities, institutional importance of scholarly activities, amount of time spent on scholarly and recreational activities, number of publications, attitudes about faculty workload, and demographic data. Attitude questions utilized a five point rating scale. Questions regarding time offered five choices for response. Items regarding publications were free response. All but one demographic item offered response choices. All surveys were personalized both in the salutation and in hand signature. All subjects were offered a summary of the results of the survey.

Since monetary incentives have been researched, a nonmonetary incentive was chosen. The nonmonetary incentive was a one-cup, sealed, decaffeinated coffee bag. A decaffeinated, sealed beverage was chosen because of the researcher's perception of health trends. Decaffeinated coffee in a sealed bag is relatively inexpensive (approximately $ 0.50 per bag) and readily available. Subjects were randomly assigned to an incentive or no incentive condition. Appeal to the subject was achieved with the following sentence in the cover letter "Your input into this matter is very important in determining what faculty consider scholarship to be." Subjects who did not receive this appeal

had the following sentence in the cover letter "It is important to ascertain what faculty consider scholarship to be in order to develop models of scholarship and further knowledge in this field." An equal number of subjects received each type of appeal. In the cover letter, subjects were asked to return the survey blank if they did not wish to participate.

Surveys were coded in the upper right hand corner of the first page to identify nonrespondents for follow-up mailings. The surveys were mailed in April. The first mailing included a cover letter, the survey, a stamped, self-addressed envelope, and an index card. Subjects indicated their desire to receive a summary of results by returning the index card with their name and address. In addition, 500 of the subjects received a coffee bag in the first mailing. The first follow-up was a postcard reminder. It was sent approximately three weeks after the initial mailing. The second follow-up was a cover letter, a second copy of the survey, and a stamped, addressed return envelope. It was mailed approximately three weeks after the postcard reminder. Forty-one of the surveys were returned as undeliverable; subjects had moved to another institution, were ill or deceased, were on sabbatical, or had retired. Nine of the subjects responded that the survey was inappropriate for them since they were not full-time or were in administration. The effective sample size was 950.

Data were analyzed using a hierarchical logit model (Kennedy, 1992) to assess the effects of the nonmonetary incentive, the appeal, and gender on response rate. Three analyses were performed. All three were 2 x 2 x 2 factorial designs using incentive, appeal, and gender as explanatory variables

and response as the dependent variable. In the first analysis, no response and refusals were combined to create a dichotomous dependent variable (completed / refused or not returned). The second analysis used response as a three level variable, considering the categories completed survey, refusal, and nonresponse. The third analysis considered only subjects who had responded to the initial mailing, to determine the effects of the independent variables on initial response. Response was the dependent variable with two levels, completed and refused.

Results

Of the 950 deliverable surveys, 552 subjects completed the survey. One hundred twenty-three returned the survey unanswered. The survey return rate was 71.5%; the completion rate was 58%. Four hundred twenty-two subjects responded to the initial mailing (354 complete, 68 refusals), 109 to the postcard follow-up (85 complete, 24 refusals), and 144 to the second follow-up (113 complete, 31 refusals).

For the first two analyses, 931 subjects were used. The gender of 19 subjects was unknown since the college catalog listed only initials for first name or names of the faculty member were not identifiable as male or female. A significant main effect was found for the incentive (residual L^2=1.75, p=.780; component L^2=6.78; $p< 0.01$). No other variables attained significant component L^2 values (see Table 1). Of the subjects receiving coffee, 63.5% returned a completed survey. Of those who did not receive coffee, 54.7% returned the survey complete. Yule's Q between incentive and response was 0.19.

Table 1

Residual and Component Associations for Logit Model Effects

Marginals Fit	Residual L^2	df	p	Component L^2	df	p
ABC,D.	10.21	7	.177			
ABC,AD.	9.24	6	.160	0.971	1	.50
ABC,AD,BD.	8.53	5	.130	0.711	1	.50
ABC,AD,BD,CD.	1.75	4	.780	6.781	1	.01 *
ABC,ABD,CD.	1.66	3	.647	0.091	1	>.50
ABC,ABD,ACD.	0.31	2	.857	1.351	1	.25
ABC,ABD,ACD,BCD.	0.26	1	.611	0.051	1	>.50
ABCD.	0.00	0	1	0.261	1	>.50

A=Appeal B=Gender C=Incentive D=Response

In the second analysis, the dependent variable had three levels: returned complete, refused, or no response. Again, incentive provided a significant effect (residual L^2=6.16, p=.629; component L^2=6.78; p< 0.01). Subjects receiving no incentive were more likely to return a blank survey or none at all (See Table 2).

Table 2

Incentive Effect on Response Rate

	Complete	Refused	No Response	Total
Incentive	287	53	112	452
Row %	63.5%	11.7%	24.8%	
Column%	51.2%	43.4%	43.1%	
No Incentive	262	69	148	479
Row %	54.7%	14.4%	30.9%	
Column %	49.8%	66.6%	66.9%	
Total	552	122	260	931

The third analysis was restricted to those who responded to the initial mailing. The dependent variable was restricted to two levels, responded or refused (returned the survey blank). There was a significant main effect for incentive (residual L^2=1.96; p=.743; component L^2=5.49; p< 0.02) with a 4.8% higher completed response rate for those who received an incentive. Those who received no incentive had a 5.6% higher refusal rate.

Discussion

The hypothesis that nonmonetary incentives increase response rate was supported, and the incentives served to increase slightly (4.8%) the response rate to the initial mailing. There was an increase of 8.8% in overall return rate for those who received coffee over those who did not. The second hypothesis was not confirmed since there was no significant difference in

response rate between those who received a utility versus a sponsor appeal. This may be due to the strength of the appeal. The appeal was contained in a single sentence. Researchers studying appeal may consider varying the strength of the appeal to study its effect. A multiple sentence appeal may contribute to an increased response rate. No significant response rate differences between males and females were found, contradicting research of Goyder (1982), Green and Stager (1986), Green, Jacobi, Lan, Boser, and Hall (1993) but confirming the research results of Green and Kvidahal (1989). This may suggest that male and female university faculty do not respond at different rates; previous research finding differing male/female response rates has focused on other populations.

The cost of including the incentive was approximately .75 per survey (cost of incentive plus extra postage). Benefits of the small increase in initial response must be weighed against costs of the incentive. A similar increase in response rate may be gained by choosing to send a third follow-up rather than including the incentive in the initial mailing. Subjects who received an incentive were less likely to refuse to complete the survey (i.e. return a blank survey). It is possible that including the statement about returning the blank survey made it easier for subjects to refuse to participate. Future studies may consider using that statement as a manipulated variable.

This population was restricted to college faculty. Different results may be obtained if a different population were targeted.

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