

## **Increasing Response Rates Among Coaches: The Role of Prenotification Methods**

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This study determined whether, in a population of intercollegiate head coaches, prenotification had a significant influence on the return rate of mailed questionnaires. Acknowledging the growing use of e-mail and the Internet for survey distribution, the current study evaluated the effectiveness of e-mail as a prenotification technique. Response rates of Intercollegiate Head Coaches to mailed questionnaires from two separate samples were analyzed. Comparisons were made based upon the categorization of coaches into groups of prenotification by e-mail, formal letter, and a non-prenotified control group. Results indicated that prenotification of the survey recipients significantly increased response rates, with the group receiving e-mail prenotification having the highest response rate among the three groups. In addition to being cost effective for researchers, e-mail prenotification was an effective way to increase both the number and variety of contacts with survey recipients.

Researchers employing survey methodologies share a common challenge in attempting to garner an adequate rate of response from their selected population. A recently conducted analysis of over 175 studies (and approximately 200,000 survey respondents) in the broader management field noted with alarm the consistent decline in reported response rates across several prominent journals (Baruch, 1999). While this trend has not been noted in the sport management literature, the importance for continued attention by researchers to survey response rates remains. As noted by Krosnick (1999), "these are exciting times for survey research. The literature is bursting with new insights that demand dramatic revisions in the conventional wisdom that has guided this research method for decades" (p. 538). Much of this optimism comes from advances in technology, through which researchers

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have realized the prospect of reducing the cost of research, increasing the speed of data collection, and allowing for larger and more diverse samples to be accessed (e.g., Dillman, 2000; Oppermann, 1995; Parker, 1992; Schaefer & Dillman, 1998).

One method used by many researchers attempting to increase rate of response in mail surveys is the prenotification (or pre-contacting) of potential respondents. Prenotification usually takes the form of a formal letter or a post card, although more rarely, it occurs as a telephone call or personal contact. The intention of establishing this initial contact is threefold: (a) to identify the researchers to the potential respondents, (b) to present the purpose of the study, and (c) to request the recipient's cooperation and participation in the research endeavor (Dillman, 2000). The fundamental assumption of prenotification is that "if respondents know something about the researcher and the study, they may be more likely to complete the questionnaire" (Duncan, 1979, p. 42). While it is unclear whether a prenotice letter results in a higher response rate because it is an additional contact of the recipient, or is in fact a unique type of contact, the positive effects of prenotifying recipients have been consistently demonstrated (e.g., Dillman, 2000; Dillman, Sinclair, & Clark, 1995; King, Pealer, & Bernard, 2001; Schlegelmilch & Diamantopoulos, 1991). Additional benefits of prenotification often include increased speed of questionnaire return, lower item non-response, as well as the ability to pre-screen respondents (e.g., Bartel Sheehan & McMillan, 1999; Schlegelmilch & Diamantopoulos, 1991).

The purpose of the present study was to evaluate whether, in a coaching population, different methods of prenotification would have differential effects on survey response rate. Specifically, the current study measured response rates among intercollegiate Head Coaches, in an attempt to evaluate the differences among those receiving prenotification by formal written letter, via electronic mail (e-mail), and a control group receiving no prenotification. While no specific hypotheses were forwarded, it was expected that the two prenotified groups would respond at higher rates than the control group.

### ***Background Literature***

Research regarding survey response characteristics has covered a wide range of areas from analyses of different cultures, to the salience of content and personalization, to the differences in response attributed to questionnaire color (e.g., Ayal & Hornik, 1986; Buttle & Thomas, 1997; Byrom & Bennison, 2000; Greer, Chuchinprakam, & Seshadri, 2000; Greer & Lohtia, 1994; Heberlein & Baumgartner, 1978; Yammarino, Skinner, & Childers, 1991). Yammarino et al. concluded that the most effective and universally consistent reported methods included pre- and post- survey appeals, and a survey length of less than four pages. While a considerable amount of research has addressed how survey response rate is impacted by various factors, relatively few studies have focused specifically on the differential impact of prenotification (Faria, Dickinson, & Filipic, 1990). In tandem with this, Faria et al. noted that very few studies have focused on comparing different forms of prenotification, to evaluate their relative effectiveness. Haggett

and Mitchell (1994) found telephone prenotification to increase response rate 76%, compared to 6% for letters and 2.5% for postcard. In another review, Jobber and O'Reilly (1998) also noted the particular effectiveness of telephone prenotification. These authors noted the inevitable cost-benefit analysis that researchers must use when evaluating the merits of the various prenotification techniques, or indeed whether to prenotify at all.

In the sport management literature, little attention has been focused on the effectiveness of the methods used for improving survey response. It has been noted that sport management studies have continuously sampled within the population of college athletics (e.g., Slack, 1996), with this seeming especially true when it comes to research involving coaches. Many researchers across disciplines contend that the growth of survey research has not only increased the number of contacts per person, but has also led to a general decline in willingness to participate in studies (e.g., Bickart & Schmittlein, 1999; Groves, Cialdini, & Couper, 1992). While there is no agreed upon standard for setting a minimum acceptable response rate (Fowler, 1984), some have noted that it may be justifiable to reject study results with response rates below 50% (Dolsen & Machlis, 1991). Baruch (1999) recommended assessing the adequacy of response rate based in part upon the type of individual being surveyed. For "top management" (a designation akin to inter-collegiate Head Coaches), Baruch recommended a norm for response rates of 36% ( $\pm 13\%$ ). By this standard, some recently conducted mail surveys of coaches have yielded response rates well within an "acceptable" range (e.g., Gould, Medbery, Damarjian, & Lauer, 1999; Inglis, Danylchuk, & Pastore, 1996; Maclean & Zakrajsek, 1996; Scott, 1999). Nevertheless, few have discussed the utilization of prenotification and none have examined whether prenotification techniques influenced the response characteristics in any significant way. Thus, it remains unclear whether various methods of prenotification might have increased response rates to even higher levels.

As alluded to earlier, advances in technology have been hailed as providing researchers with heretofore unimagined ability to quickly, effectively and affordably conduct survey research. For sport management researchers, e-mail and websites are becoming an increasingly popular method of survey distribution (e.g., Pitts & Ayers, 2001; Stier, 2001; Wells, Southall, & Peng, 2000). Unfortunately, the optimism that technology innovations have generated among many researchers has not uniformly translated into increased response rates (Kittleston, 1995; Schuldt & Totten, 1994; Tse, 1998; Weible & Wallace, 1998). Some more fundamental problems unique to electronic survey methodologies include limited access of population, reliance on technical sophistication of recipient, and potential non-representativeness of respondents (Dillman, 2000; Oppermann, 1995). Another drawback, which is certainly not unique to electronic surveying, is the "disposability factor." E-mail deletion is easy and common with unsolicited items, often before any message text is read. While researchers have quickly embraced technology for survey administration, very little has been done to investigate whether or not a simple technology such as e-mail could be used in conjunction with a traditional survey to increase response characteristics. As noted by Schaefer and Dillman (1998), a

method for achieving consistently high response rates through e-mail has not yet been developed. Results of their study among university faculty revealed that a "multimode strategy" which mixed both traditional paper and electronic contact produced the most successful response pattern among the entire population.

### ***Methodology***

The data included for this analysis were obtained in two separate studies. The studies each sampled full-time NCAA Head Coaches from a nationwide population that included a total of 1020 coaches. Up to date listings of coaches names and e-mail addresses (where available) were obtained from staff listings found in the Blue Book of College Athletics (Beazley, 2000) and from subsequent searches of the various school world wide web directories. From the total sample, 525 coaches with valid e-mail addresses were identified. From this group, 340 coaches were randomly selected to receive e-mail prenotification, leaving 680 coaches to be equally and randomly assigned to either the formal letter prenotification group, or the control group which received no prenotification. In one study, 314 coaches received a 91-item questionnaire while in the second study the remaining 706 coaches received a 97-item questionnaire. Both questionnaires were of similar style and contained items pertaining to leadership styles and commitment to the coaching profession.

The control group received no prenotification, but rather were simply mailed a packet that contained an introductory letter, the questionnaire itself, and a stamped, self-addressed return envelope. Treatment group one was sent an introductory letter by mail ten days prior to the mailing of the questionnaire packet while members of treatment group two were sent an introductory letter via e-mail seven days prior to the mailing of the questionnaire packet. The prenotification of the two treatment groups was staggered slightly so that the likelihood of a similar time lapse between receipt of prenotification and receipt of questionnaire packet was increased. Content of the prenotification letters were identical for both study administrations, and for both treatment groups. The data collected were analyzed using chi-square analyses and independent sample t-tests, following the methodological lead of Schaefer and Dillman (1998).

### **Results**

Of the 1020 subjects included in this study, 448 usable questionnaires were returned for an overall response rate of 43.9%. The respondents included 123 females (28%), 325 males (72%), 197 coaches from women's teams (44%), 160 coaches from men's teams (36%), and 91 coaches from teams including both men and women (20%). The mean age of the responding coaches was 41 years with a range from 22 to 76 years of age.

Of primary concern to all studies using survey research is non-response error. Non-response bias is the potential difference between those who respond to a survey and those who do not (King et al., 2001). One method to help control non-response error is to compare early to late respondents (Miller & Smith, 1983).

For this study, early respondents were defined as those who returned their questionnaire within three weeks of the initial mailing, while late respondents were those who returned their questionnaires after that cut-off point. According to Miller and Smith (1983), late respondents are often similar to non-respondents; in other words, late respondents are assumed to be typical of non-respondents. Before any analyses were done for this study, responses from early and late respondents were compared using chi-square ( $\chi^2$ ) and independent sample t-tests. No significant difference was found between early and late respondents based upon type of prenotification ( $\chi^2 = .532$ , Cramer's  $V = .344$ ,  $p = .766$ ), sex of coaches ( $\chi^2 = .671$ , Cramer's  $V = .39$ ,  $p = .413$ ), sex of sport ( $\chi^2 = 9.344$ , Cramer's  $V = .144$ ,  $p = .590$ ), nor age of coaches ( $t [444] = .90$ ,  $p = .368$ ).

Response rate statistics for the two prenotification treatment groups and the control group are presented in Table 1. Prior to pooling the data, the samples were independently compared to one another and were found to have similar distributions with no significant differences in overall response rate ( $\chi^2 = .893$ , Cramer's  $V = .030$ ,  $p = .345$ ), letter prenotification response rate ( $\chi^2 = .291$ , Cramer's  $V = .029$ ,  $p = .590$ ), e-mail prenotification response rate ( $\chi^2 = .933$ , Cramer's  $V = .052$ ,  $p = .334$ ), nor control group response rate ( $\chi^2 = 3.030$ , Cramer's  $V = .094$ ,  $p = .082$ ). To determine the effect of prenotification on response rates on the pooled data set, the two treatment groups were combined and compared to the control group. A significant difference in response rates was found between those who received some kind of prenotification notice (47.8%) and those that did not (36.2%;  $\chi^2 = 12.421$ , Cramer's  $V = .110$ ,  $p < .001$ ). Comparing the two treatment groups separately with the control group also produced a significant difference ( $\chi^2 = 16.152$ , Cramer's  $V = .126$ ,  $p < .001$ ). Subsequent analyses found the use of both letter prenotifications ( $\chi^2 = 4.461$ , Cramer's  $V = .081$ ,  $p < .05$ ) and e-mail prenotifications ( $\chi^2 = 16.152$ , Cramer's  $V = .154$ ,  $p < .001$ ) produced significantly higher response rates than no prenotification. However, the difference in response rates between the two treatment groups was not statistically significant ( $\chi^2 = 3.684$ , Cramer's  $V = .074$ ,  $p = .055$ ).

**Table 1 Descriptive Results for Response Rate**

Prenotification method	# of Coaches sampled	# of Returned surveys	Response rate (%)
None	340	123	36.2
Letter	340	150	44.1
E-mail	340	175	51.5
Total	1020	448	43.9

## ***Discussion***

The ability to obtain adequate response rates is a concern for researchers in all fields, including sport management. While many studies and reviews in the organizational and educational literatures have examined means of increasing response rates, few (if any) have investigated this topic using samples relevant to sport management researchers. This study attempted to fill the void by looking at one technique commonly used to increase response rates—prenotification of questionnaire recipients.

Using two prenotification techniques in comparison with a control group, a significant increase in the response rate for coaches was shown in this study. While the overall response rate for questionnaires sent out in two separate studies was 43.9%, those who received a prenotification letter or e-mail responded at a higher rate (44.1% and 51.5%, respectively) than those who did not receive prenotification (36.2%). Subsequent analyses revealed that these differences were not further explained by the gender, age, or the sport or gender of the teams coached. Additionally, although other commonly reported benefits of prenotification include increased speed and quality of responses (e.g., Dillman, 2000; Dommermuth, Summey, & Taylor, 1981; Hornik, 1982), no such differences among the groups were found in this analysis.

The particular effectiveness of e-mail prenotification in this study merits further discussion. While e-mail prenotification was not statistically better than formal letter in increasing response rate, the practical difference (+7.4%) was nevertheless notable. Reasons for the effectiveness of e-mail in this study may be that it followed the mixed mode strategy shown to be effective elsewhere (Schaefer & Dillman, 1998), or that it combined the strategies of increasing not only the number of recipient contacts but the variety of contacts as well (Dillman, 2000). Schaefer and Dillman (1998) also found that prenotification by e-mail was more effective than formal letter. However, that study used an e-mail questionnaire, and therefore an explanation of “similarity of format” between the prenotice and the survey would be contradicted by the current findings. Further research is clearly needed to determine the relative effectiveness of the new wave of electronic modes of survey delivery and/or recipient contact in all fields of study, including sport management. Even if lacking a clear understanding of why e-mail prenotification was effective in the current study, e-mail obviously has the added advantage of being cost effective for researchers. The present findings do not show that e-mail is necessarily the best prenotification method, but they do provide optimism for those wishing to decrease costs without sacrificing effectiveness in survey techniques.

A limitation of this study is that although there were an equal number of coaches in each of the three conditions, not all coaches in the sample had valid e-mail addresses. Having a percentage of a selected population without access to (published) e-mail is not a limitation that is restricted to coaches, but in fact is a common shortcoming (Dillman, 2000). Therefore, researchers wishing to utilize e-mail prenotification uniformly throughout their sample will likely experience some difficulties in this regard. With the constant advancement of technology

however, it may be assumed that over time, this limitation will become decreasingly problematic. Another drawback of this analysis stems from the lack of demographic data available for non-respondents. Wherever possible, future research of response patterns should obtain information about non-respondents that would help to investigate more conclusively whether or not variables such as gender, age, tenure, sport, gender of sport, or college type might be influencing factors.

Overall, the use of either of the prenotification treatments significantly increased the response rate in our sample over the "no prenotification" control group, and thus either is recommended over the option of a "cold" mailing. Where cost is not an issue, future researchers may want to examine the effects of not only different single methods of prenotification but of the effects of multiple methods of prenotification. It may be that some sort of cumulative effect could be seen in those studies where prenotification of a single recipient took multiple forms. Additionally, future research may also want to assess the congruence of format in which both the prenotification and surveys are delivered. If mailed, e-mailed or telephoned prenotification is used with a member of a population, then, as found by Schaefer and Dillman (1998), it may be that having the survey administered in the same fashion would be preferable. Investigations of other sport management populations should continue to examine the relative effectiveness of inducement techniques often cited in marketing research and social science literatures, in order to aid future research endeavors in the field.

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