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# The Differential Effectiveness of Survey Recruiting Methods



by Joshua Bishop, Darren Hansen,  
Chantelle Lyman, and DJ Steffensen

*Participant recruitment in survey research is an essential part of many research studies, especially those conducted in academic settings. The purpose of this study was to determine the current, most-effective methods of recruitment. We used four methods to administer the same survey. They included the traditional methods of classroom presentation and face-to-face recruitment using fliers, and the more recent methods of mass e-mails to class lists and social-network mass messaging. We analyzed the data using a chi-square test to compare and determine the most effective method of recruitment. We found that recruitment through the social-networking site Facebook was the most effective method, with 37% of those recruited taking the survey. Mass emails to class lists was the next most effective method, followed by face-to-face recruiting and classroom presentations. These findings were statistically significant at  $p < .01$ . For researchers looking for a diverse sample, Facebook offers a quick, inexpensive, and efficient method of recruiting.*



Participant recruitment is an essential part of survey research. Several methods are currently used to recruit participants. Before the advent of computer-based mass messaging, face-to-face recruiting was often used. Researchers visited classrooms, where they gave brief presentations and invited students to participate. Other face-to-face recruiting involved the distribution of fliers containing information on how to participate (Rife, 2010). Although these methods of recruiting can be time consuming, they offer specific advantages. One is that personal contact with potential participants allows the recruiter's personality to promote participation. Face-to-face recruiting also allows researchers to recruit when it is most convenient for the participants, namely, while they are attending class meetings (Lindsay, 2005; Rife, 2010). These advantages make face-to-face a popular method of recruitment.

With recent advances in technology and communications, Internet-based surveys have become popular (Lenert & Skoczen, 2002), not least because they can occur quickly and cost-effectively (Ramo, Hall, & Prochaska, 2010). Surveys can be distributed to hundreds of potential

participants simultaneously (Birnbaum, 2004; Rife, 2010) and may enable survey results to be more generalizable (Klauer, Musch, & Naumer, 2000). Additionally, there is evidence that online recruitment reduces social-response bias that may otherwise occur with sensitive issues (Cantrell & Lupinacci, 2007; Rhodes, Bowie, & Hergenrather, 2003). For example, one study found that when compared to participants surveyed through paper-based methods, those surveyed online reported lower levels of social anxiety and social desirability (Joinson, 1999). Because of its cost-effectiveness, generalizability, and quick delivery, online recruiting has become increasingly popular.

Little experimental research has been done to determine whether a particular method of recruiting is more effective than the others (Koo & Skinner, 2005), where effectiveness is measured in terms of response rate. The purpose of this study was to determine the differential effectiveness of four popular methods: face-to-face with fliers, classroom presentations, mass e-mails to class lists, and social-network mass messaging.

There are many aspects to consider in further determining the relative cost-effectiveness of the methods. For instance, research costs (Lenert & Skoczen, 2002; Ramo, Hall, & Prochaska, 2010) and research time spent may differ depending on the method used. We attempted to weigh costs and benefits of each method in our analysis after determining their relative effectiveness. We hypothesized that social-network mass messaging would be most effective because of its convenience for participants.

## Method

### Participants

We attempted to recruit survey respondents who were representative of the Brigham Young University (BYU) undergraduate-

student population. Thus recruitment included face-to-face invitations, e-mailed invitations, in-class invitations, and Facebook ([www.facebook.com](http://www.facebook.com)) invitations. The face-to-face method involved two researchers, one male and one female, handing out printed fliers at the Cougareat, a food court at BYU. The fliers contained a web link to the survey. This was perhaps the most representative method, as the Cougareat is a common gathering place for students of many fields of study. For the e-mail method, a mass e-mail with a link to the survey was sent via Blackboard ([blackboard.byu.edu](http://blackboard.byu.edu)), an online classroom-management tool. This method benefitted from its large and somewhat diverse pool, yet was limited by our available access—our access to emails was determined by the classes in which we were enrolled. The same two researchers who used the face-to-face method visited classes, where they announced the survey and wrote the web link on a whiteboard. Again, this was limited to classes where access was granted. Finally, the Facebook method involved one researcher sending an invitation to his “friends” to take the survey via a web link. He randomly populated the friends list by selecting people based on the first letter of their last name. Although this method was perhaps representative of college-age participants, it was the least representative of the BYU population, as it opened the survey to non-BYU students.

The total number of participants recruited was 357 (face-to-face,  $n=100$ ; e-mail,  $n=127$ ; in-class,  $n=70$ , and Facebook,  $n=60$ ). Most participants were ages 18–24 and were enrolled at BYU.

### **Procedure**

The survey was titled “Movies” (see Appendix A) and included general questions about movie-theater behavior. Demographic items of the survey included such things as gender, race, and highest level of education. Because the purpose of the study was to compare percentages of response, the actual answers to most of the questions

were irrelevant. The question “How did you hear about this survey?” was included at the beginning of the survey. Answer options for this question were (a) word of mouth, (b) e-mail (c) in-class, (d) Facebook, and (e) other. Data from respondents who answered “other” were discarded. The movie survey was published at the Qualtrics website ([www.qualtrics.com](http://www.qualtrics.com)) and made available for one week.

### **Analysis**

We obtained the return rate for each method by calculating the percentage of invitees who completed the survey. We calculated the percentages by dividing the number of people who completed the survey by the number of people who were recruited. To determine whether there was a significant difference between methods, the percentages were compared using a chi-square test of independence.

## **Results**

As shown in Table 1, recruitment through Facebook ( $n=22$ ) resulted in a 37% return rate. Blackboard e-mails ( $n=35$ ) brought a 28% return, face-to-face recruitment ( $n=11$ ) 11%, and in-class recruitment ( $n=3$ ) 4%. Males and females responded equally. The results from five respondents were deemed unfit for the survey so a total of 71 respondents were included in the chi-square analysis.

We used a contingency table (see Table 1) for the chi-square test for independence. After using the expected and observed outcomes to calculate the value of each cell, we found that the rates of return varied significantly according to the method by which participants were recruited,  $\chi^2(3, N=71)=30.96, p < .01$ .

## **Discussion**

Based upon our results, we conclude that Facebook was the most effective method for recruiting participants in our survey. Because the chi-square test for independence yielded a significant result, the pattern of the observed response-rate percentages was different than the pattern

of response-rate percentages expected by chance. The Facebook sample was also the most diverse among the four methods in terms of education level, age, and marital status.

Some limitations accompanied our study. Although the pool of Facebook “friends” from which we recruited was large (N=800), the entire pool identified with one person. It is therefore unlikely that a Facebook sample could ever be purely representative of any population other than that of an individual’s circle of acquaintances, thus limiting external validity. There is also likely some effect of familiarity on those recruited via Facebook. Potential respondents who know the recruiter well might feel an obligation to respond to the request.

The in-class method was limited to one sample of BYU psychology students, and the e-mail method likewise only recruited from a single sample. Although the face-to-face method produced only an 11% return rate, it may have been the most representative sample of BYU students due to the popular location at which the fliers were distributed. It is reasonable to assume that the face-to-face method would produce a higher response rate if the survey was conducted in paper form at the time of recruitment rather than requiring respondents to complete the survey online. Although we defined effectiveness in terms of response rate, an element of effectiveness is the representativeness of the sample. If a researcher wants the results of his or her survey to adequately predict the behavior of a specific population, the sample from which participants are drawn should properly represent the targeted population. This will allow the results to be generalizable.

Another limitation of the study might be that the topic of movies was more interesting to some potential participants than to others. Further research could investigate levels of response to surveys across various topics. Also, those receiving the survey link from an e-mail or

Facebook message had instant access to the survey. They needed only to click on a web link and answer a few questions. In contrast, those who were recruited in class or face-to-face had to enter the web link in a browser in order to take the survey, which may have discouraged potential respondents from taking it.

As already noted, future studies might involve the same methods but use different types of surveys. Facebook works well for online surveys but may be unworkable for a two-hour session that requires people to travel in order to participate. Another idea for future research is to use the same survey methods but offer incentives for participation. No incentives were offered in the present study. For example, it seems reasonable that in-class recruiting might work better if the recruiters were to offer extra credit, money, food, or other free items.

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Table 1  
*Contingency Table of Chi-square Test for Independence.*

		Facebook	Blackboard E-mail	Face-to-face with fliers	In-class presentation	Total
Response Rate %	Observed	37% (22/60)	28% (35/127)	11% (11/100)	4% (3/70)	71
	Expected	<i>See note below.</i>				
Total invited		60	127	100	70	357

*Note.* Researchers were not concerned with the amount of respondents, only in the degree to which response-rates were or were not similar across all categories. Thus, the expected response-rates could have been anything, so long as they were equal.

## Appendix A

### *Movies Survey*

1. This survey will ask you questions about your movie theater preferences and behaviors. There will also be several questions about demographics such as age, education, race, and gender. There is no compensation for this test, but you will be helping us gather information for this study. There are no risks involved and the questions are anonymous and aren't meant to be too personal or offensive. If you have read this and consent to taking this survey, please select "Yes" and continue with the survey. If you do not wish to participate, please select "No". Thank you.
2. What is your gender?
3. What is your race?
4. What is your age?
5. Which best describes you highest level of education achieved?
6. If you are currently enrolled in a university, what is your major?
7. How did you hear about this survey?
8. When you buy tickets to the theater, which method do you use to purchase the tickets?
9. Do you get the movie theater popcorn?
10. Do you buy drinks at the theater?
11. Uh, we had a slight weapons malfunction, but uh... everything's perfectly all right now. We're fine. We're all fine here now, thank you. How are you?
12. Do you buy candy or other treats at the theater (besides popcorn and drinks)?
13. Where do you like to sit in the theater?
14. Is it safe? Is it secret?
15. Will you commit to this program?
16. When there is a movie you want to see, what do you do most often?
17. Please select the answer that best matches you / how you feel.
18. Are you currently in a dream? Or are you awake?

