Methodology for Conducting a Web-based Survey of Museum Professionals

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In August 2007, the John Nicholas Brown Center at Brown University conducted a Web-based survey of its regional audience of museum professionals. The goals of this survey were to identify topics of interest to museum professionals; to determine the composition, in terms of role and responsibility, of the survey participants; and to receive input regarding the preferred duration of workshop sessions and the amount that museum professionals are willing to pay for training. The survey gathered information that should prove helpful to the Center and to other universities and professional organizations that organize museum professional training. This paper discusses the methodology used by the Center to conduct this survey, and serves as a case study of the benefits and challenges of using Web-based tools for conducting these types of assessments.[1]

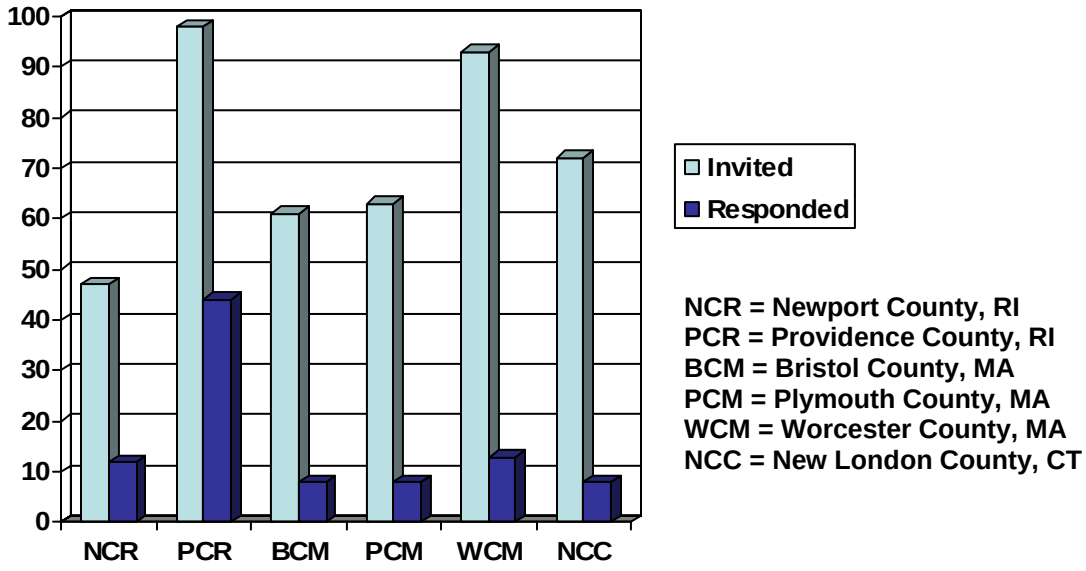
My first step in developing this survey was to identify the geographical range of the Center's constituency. Using a map, I drew an arc from New London, Connecticut, to the entrance to Cape Cod in Bourne, Massachusetts, and eliminated museums from the greater Boston area. I chose these geographical limitations for several reasons: I wanted recipients of the survey to work or reside within a 1-2 hour drive from the Center's location in Providence. In this way, I believed I could be reasonably certain that travel time would not be an impediment to attending the Center's workshops, or provoke reluctance to respond to the survey. In short, I considered convenience a chief factor in attracting workshop and survey participants. Limiting the geographic area also limited the scale of the survey; too large an area would lead to an excessively difficult task compiling contact information and distilling data. I eliminated the

Boston area because, again, the large concentration of museums in that area would lead to an unwieldy survey size, and because that area is already well-served by professional development programs sponsored by the New England Museum Association, Tufts University's museum studies program, and Harvard University's museum studies extension school. The resulting survey area included Rhode Island, southeastern Connecticut, and southeastern Massachusetts.

Using this geographically defined area, I recruited a recently graduated student in the public humanities program, Nicole Restaino, to develop a list of museums within this area, and to identify email contact information for staff within these museums. Nicole used the 2006 *Official Museum Directory* to identify the museums, the museums' Websites to identify staff, and much patience and perseverance to develop a list of 135 museums and 478 email contacts. Research has shown that this type of probability- or list-based survey, in which a researcher selects recipients of a survey based upon specific pre-determined qualifications or characteristics, rather than from a random pool such as a public listserv, a Web page, or a conference booth, produces results of greater accuracy.[2] However, as a complete representation of the Center's chosen audience, this list had some limitations. For instance, some museums do not appear in the directory and could not be included. Also, museums often do not include their entire staff or their email information on their Websites, instead listing only leadership-level or senior staff; other museums choose to use a single generic email address or a Web-based form as a means to contact the museum; and very few museums list contact information for trustees and virtually none list contact information for volunteers. Therefore, the results of this survey may overlook or under represent some museums and museum personnel. By contrast, some larger museums, such as Mystic Seaport, list the email addresses of virtually every member of their staff on their Websites, perhaps skewing the results in favor of respondents from these institutions and their

geographic areas. Since the survey did not require respondents to provide their names or institutional affiliations—this was voluntary—it is impossible to determine exactly to what extent these factors influenced the survey's outcomes. However, the geographic location of the respondents provides some insight.

The following graph compares the number of respondents to the number of invited participants by county and state in the survey's target area.



Shown in this graph are the six largest groups of invitees (the remaining five groups were too small in number to be statistically meaningful.).[3] The graph demonstrates that location, more than the size of the pool of invited participants from a given area or museum, influenced response to this survey. The highest percentage of respondents (45%) came from Providence County, where the John Nicholas Brown Center is located. The next highest percentage (26%) came from Newport County, also in Rhode Island. The response rate from the other four locations on the graph, all in Massachusetts and Connecticut, ranged from eleven to fourteen percent. Apparently, the perceived convenience or inconvenience of the location of the John

Nicholas Brown Center greatly influenced invitees' level of interest in completing the survey and probably will influence their desire and ability to attend training sessions. One respondent who resides outside the survey area but whose museum is located within the survey area commented, "I am not willing to travel to Providence." It is unclear if this respondent objected to the distance she must travel to attend or to the location itself. One way to address the reluctance of some audience members to travel moderate distances is to organize workshops in their areas.

Another important consideration was the means by which to deliver the survey. A variety of studies conducted between 1999 and 2005 demonstrated that paper-based, or postal mail, surveys, typically garner a higher response rate than Web-based surveys. The average response rate for postal mail surveys, based on these studies, was 38%, with a high of 48% and a low of 26%. The response rate for Web-based surveys averaged 29%, with a high of 44% and a low of 10.6%. Other researchers have suggested that completion rate, or the number of people who start and finish a survey, is a more accurate reflection of the success of Web-based surveys. Using this measure, one researcher found that Web-based surveys yielded a 97.1% completion rate versus 81.8% for paper-based surveys.[4] The John Nicholas Brown Center's survey yielded a response rate of 29%, identical to the average for Web-based surveys determined by the study, and a completion rate of 82%, lower than the rate shown by the study for Web-based surveys but almost identical to the rate for paper-based surveys.

To employ a survey that is both Web-based and list-based, a direct email invitation to the targeted audience is the most practical approach. However, spam filters and the proliferation of spam in general present serious hurdles. Some email invitations to potential participants may have been mistaken as spam and inadvertently deleted, while finely meshed spam filters may have trapped others. It is difficult to surmise the extent to which these factors affected response

rates to the Center's survey, but one invitee reported that she received her invitation to participate two weeks after I first delivered the survey, and one day after I closed it to responses. A reminder email that I sent out one week after the initial invitation may have ameliorated this problem to an extent. Studies have shown that reminders have a modest positive impact on response rates.[5]

I chose to employ a Web-based survey mostly for simple reasons: a Web-based survey took less time to prepare and deliver than a paper-based survey and simplified the process of collecting and analyzing results. In addition, the Web-based service that I chose to employ, SurveyMonkey.com, offers a variety of tools to make surveys attractive, user-friendly, and effective. SurveyMonkey offers a variety of templates, design themes, and question types—including drop-down lists, multiple-choice answers, rating scales, and text boxes. Other features include the ability to require responses, ensuring that participants answer key questions, and "skip logic," which allows participants to skip automatically questions that are irrelevant based on a prior answer. For instance, if a participant indicated they are interested only in one-day workshops, the survey skipped questions regarding multiple-day workshops. SurveyMonkey also provides tools to analyze, filter, and download responses in a variety of formats. In short, Web-based survey applications such as SurveyMonkey are powerful tools for collecting and analyzing information.

To read a full analysis of the results of the survey, click on the following link: http://www.brown.edu/Research/JNBC/Museum%20Professional%20Training%20&%20Education.pdf. To view the raw numbers from the survey, click on this link: http://www.brown.edu/Research/JNBC/Raw%20numbers.pdf

Web-based surveys are an effective tool for gathering and sharing opinions from museum professionals. As in most surveys, the chief question is whether the survey reached a representative cross-section of the target audience. In the case of the Center's survey, this depended on the completeness of email contact information on individual organizations' Websites. However, even if I had chosen to utilize a paper-based postal survey, it is unlikely that the survey would have reached a broader cross-section of the Center's audience, since this delivery method would also have relied upon staff lists obtained from institution websites or from distribution of the survey between staff within the museum. In fact, the ability to easily forward emails within museums likely makes this a more effective means of distribution. During a conversation with a colleague, I asked if she had received the survey. She responded that she had not received it directly, but rather as a forwarded email from a fellow staff member. Nevertheless, researchers who conduct this type of survey must keep in mind the possible limitations of their list of participants and factor that into the interpretation of their results.

Endnotes

[1] For an excellent overview of the types, usefulness, and methodology of these tools, see "Web-based Surveys: Best Practices Based on the Research Literature," by Chris Parsons, *Visitor Studies*, 2007, 10(1), 13-33, which can be viewed online at http://www.informalscience.org/knowledge/citation_view.php?refID=5311.

[2] Parsons, pp. 14-15.

[3] The other groups were Bristol County, RI (17 invitees, 10 responses, 59%), Kent County, RI (5, 1, 20%), Washington County, RI (11, 1, 9%), Norfolk County, MA (8, 1, 12%), and Windham County, CT (3, 3, 100%).

[4] Parsons, pp. 16-17.

[5] Parsons, p. 22.