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TOPIC AREA:
Internet and the World Wide Web

A Model for Web-Based Instrumentation in Survey Research

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Introduction

The Internet has provided researchers and excellent platform to employ web-based surveys to collect data. There are advantages and disadvantages of web technologies in comparison with less technically complex methods.

The recent popularity and wide availability of World Wide Web technologies provide the educational researcher with a new medium for improving research methods and data collection. Some qualitative research is progressively becoming more dependent upon the web-based collection of survey data. The development of client-side tools incorporated into the user's browser software (such as JavaScript) provides a medium for the minimization of incomplete data sets without need for additional server transactions.

Purpose of Study

The relatively new media of the Internet provides a vehicle for multiple methods of collecting survey research data. The problem this case dealt with was to provide a web-based instrument to collect multiple rounds of survey data. The purpose of this study was to provide a case model for collecting survey data utilizing a web-based page design.

Brief Review of Literature

During this advent of the 21st century, the World Wide Web spans the globe, and geographical boundaries are becoming less of an issue in communications. Because of this innovative medium (which is still less than a decade old), the cost of survey administration for educational research is becoming cheaper, and the amount of work required in survey distribution, collection and analysis is greatly reduced. Although studies remain to be done, the validity of web-based survey research is likely to be strongest for researchers who target specific population samples (Watt 1999).

Traditional methods of survey distribution and recollection that utilize the postal system are slow and provide low rates of return. Internet technology provides a medium to drastically decrease the amount of time and provides easy follow-up using electronic mail (Turner & Turner 1999). Early methods of Internet-based data collection typically embedded the instrument directly in the body of an email message and requested the response to be replied to as an attachment or modification of the original message. However, researchers are increasingly directing participants to complete instruments that have been published as web pages (White & Dailey 2001)

Research Question

The following question is guiding the research: "What do professional web page designers consider important characteristics of an effective World Wide Web survey?"

Methodology

This study is being completed from September through November 2001. The first phase involved identifying a national panel of experts to include 21 participants from the Association of Internet Professionals (AIP) and the World Organization of Webmasters (WOW). All panelists were invited to participate in multiple iterations of communication utilizing the Internet and the World Wide Web as a primary media. The identities of the panelists are being kept confidential throughout the study, and each panelist is assigned a unique identity that keeps the panelist anonymous to the other participating panelists.

The panelists were involved in answering another research question to collect data relevant to web design. The first round of communication involved an open-ended questionnaire requiring a response to an objective. The second round presented statements collected from all participants, and each panelist rated the importance of each resulting statement from the first round according to a 5-point scale. The third round of the procedure involved a communication of the instrument in revised format. The inclusion of the group and individual responses from the previous round allowed each panelist an opportunity to re-rate each item based upon the group response.

A formative instrument was employed as a final step allowing all the participants to provide qualitative feedback concerning the design of the web-based survey instruments used during their participation in the study.

As the findings of the research question were in progress at the time of the writing of this paper, the results will be presented along with a demonstration of the tools and scripting used for each web-based instrument deployed during the data collection phase.

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