Audio Computer-Assisted Self-Interviewing

RTI is a leader in employing new techniques and strategies to increase the quality and accuracy of the interview process. One such innovation has been the development of audio computer-assisted self-interviewing (ACASI). RTI pioneered the development of ACASI, a face-to-face interviewing methodology in which the interviewer gives control of the interview—including the computer—to the respondent. Using a set of headphones, the respondent listens to a digitally recorded voice read the questions aloud as they appear on the computer screen; he/she then enters his/her own responses directly into the computer. After a response is entered, the computer selects the next question to be administered, typically following a predetermined skip pattern based on the parameters of the particular study questionnaire.

- **ACASI Benefits:** ACASI provides the following benefits:
  
  - **Increased Privacy:** Through the use of headphones and the elimination of the interviewer, ACASI affords a higher level of privacy to the respondent and alleviates some concerns about confidentiality of responses.
  
  - **Complex Sequencing:** Programmed skip patterns facilitate the use of highly complex questionnaires that help reduce response errors, tailor questions to address very specialized concerns, and increase overall instrument efficiency.
  
  - **Reduced Illiteracy Barrier:** ACASI allows the self-administration of surveys by illiterate populations.

- **Methodological Research:** RTI’s survey methodologists are recognized leaders in assessing the effectiveness of ACASI data collection as a tool for reducing response error by minimizing the under-reporting of sensitive behaviors. For example, in an experimental study led by RTI (the National Survey of Adolescent Males: Follow-up and New Cohort—NSAM), respondents randomly assigned to answer questions using ACASI reported higher levels of risk behaviors (by a factor of 2 to 3) over those who responded using a more traditional self-administered questionnaire. The results of this study were published in *Science.*

- **Additional ACASI Studies:** In addition to the NSAM study described above, we have used ACASI technology on a number of other projects, including:

  **1999-2003 National Household Survey on Drug Abuse:** NHSDA is a nationwide survey on tobacco, alcohol, and drug usage in the United States that is sponsored by the Substance Abuse and Mental Health Services Administration. Approximately 70,000 CAPI/ACASI interviews were conducted in 2000; 67,500 interviews are projected for each of the following years.

  **National Survey of Child and Adolescent Well-Being (NSCAW):** Sponsored by the U.S. Department of Health and Human Services’ Administration for Children,

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Youth, and Families, this longitudinal study involves three waves of data collection over a 3-year period with a cohort of 6,100 children and adolescents who have come into contact with the child welfare system. ACASI is being used to collect sensitive data from children and their current caregivers. For young children (ages 5 to 10), we developed a special ACASI procedure in which the child hears the question through headphones, and points to the response printed on a showcard. The interviewer then enters the response into the laptop.

Child and Family Well-Being Study: This longitudinal study, sponsored by a consortium of universities led by researchers at Johns Hopkins University, examines the effects of welfare reform on families and children in Boston, San Antonio, and Chicago. The study involves three waves of data collection with approximately 2,400 children and their primary caregivers in poor or near-poor families. Interviews are being conducted using CAPI/ACASI technology. Standard developmental tests are being administered to the children. Additional interviews with the primary caregivers, biological fathers, and child-care providers have been conducted for a subset of the cases.

National Survey of Family Growth—Cycle V: NSFG, sponsored by the National Center for Health Statistics, is a periodic national study of fertility and population growth in the United States. For Cycle V, we interviewed approximately 10,800 women of childbearing age using CAPI/ACASI. Results showed an increase in the reporting of sensitive behaviors, especially sexual behavior and abortions.

Adolescent WIC Participants Study: Conducted by RTI for the U.S. Department of Agriculture, Food and Consumer Service, this study illustrates an example of a novel application of ACASI. Our experience conducting past WIC studies has shown that telephone and mail survey methodologies have limited effectiveness in gathering information from adolescent WIC clients. This is in part due to the sensitive nature of the topics and problems related to language and literacy. To address these problems, RTI developed an ACASI system that was used at WIC clinic sites to administer the adolescent survey to a national sample of 4,200 adolescent WIC clients at 100 clinics.