

Data Collection Method Brief

Collecting Data from Children Ages 9-13

APPENDIX A: COMPUTER BASED SURVEYS

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<http://www.lpfch.org/informed/facts/etr.html>

Computer-Based Surveys

How have computer-based surveys been used for collecting information from children?

Researchers and practitioners use computer-based surveys to collect health information and/or to measure program effects. Computer-based surveys have been used successfully with children ages 8 and older. Some computer-based surveys involve having individuals use laptop or desktop computers. These surveys may include an audio component (called A-CASI: Audio-Computer Assisted Self-Administered Interviewing) or feature multimedia (called M-CASI: Multimedia Computer Assisted Self-Administered Interview). Surveys are now administered using handheld or personal digital assistants (PDAs) and via the Internet. Computers are also used as a way to record information with other data collection approaches (e.g., diaries, interviews, and observations).

What are important considerations when using computer-based surveys with children?

- ✓ Children under 11 years of age may need visual as well as verbal stimuli to make issues concrete.
- ✓ Investigators can use standard survey questions with children 11 years of age and older, but the questions must be modified to reflect children's cognitive and language abilities, address issues of confidentiality of reporting certain behaviors, and ensure they are relevant to children's main social and cultural context (e.g., home or school).
- ✓ In general, children perceive computer-based surveys as fun and interactive.^{3,16,21}
- ✓ The increase of computers in schools makes it more practical and economical to use computer-based surveys in school settings, but computing capacity still varies widely across school districts.¹⁹
- ✓ Filling out computer-based surveys is typically easier for children than filling out written surveys because of features such as audio and automatic skip patterns.²²
- ✓ The inclusion of graphics, encouraging words, and color help keep children motivated and interested in computer-based surveys.^{1,16,21}
- ✓ The use of audio-enhanced computer-based surveying is ideal for children with lower literacy skills.^{1,3,16,18,19,21} It also can provide an opportunity for children to hear a culturally familiar voice.^{1,3,16}
- ✓ Children can typically complete more questions in a given timeframe on computer-based surveys than on written surveys.
- ✓ Computer-based surveying saves resources (e.g., paper, data entry costs, data cleaning time).^{8,12,14,16,17,21-23} It also facilitates data analysis by reducing the potential for data entry errors and reducing the time between data collection and analysis.^{8,16,21-23}
- ✓ The number of children interviewed at a single time is limited by the number of computers available for surveying.
- ✓ Hardware and/or software purchases can increase the cost of data collection, particularly for one-time data collection efforts.¹⁶
- ✓ Children's self-reported rates of risk behaviors or socially undesirable behaviors tend to be higher using computer-based surveys compared to other methods (e.g., written surveys).^{1,3,15,17,19,21,22}

	<ul style="list-style-type: none"> ✓ Some research shows that children who complete surveys at school report higher levels of some risk behaviors than those who complete surveys at home.⁴
<p>What are the advantages of using this approach?</p> <ul style="list-style-type: none"> • Acceptability • Ease of use • Flexibility • Privacy • Data quality • Data management • Cost 	<p>What the Research Says...</p> <ul style="list-style-type: none"> ✓ Children ages 10 years and older prefer computer-based surveys over written surveys.^{5, 10-12, 15, 19} ✓ This approach is particularly beneficial for youth who are easily distracted or bored with written surveys.¹⁶ ✓ Computer-based surveys can reduce stress and discomfort that some youth experience in personal interviews.^{1, 3, 15, 17} ✓ Depending on the computer screen, this method can offer more privacy for sensitive questions compared to written surveys.^{1, 3, 7, 16, 17, 19, 20} ✓ Computer-based surveys are less vulnerable to potential variation in question asking that can occur in individual interviews.^{1, 3, 4, 18} ✓ The reliability and validity of responses using computer-based surveys is typically better than other methods (e.g., written surveys and interviews).^{8, 14, 16, 17, 23} ✓ The data quality from Internet-based surveys was compatible to written surveys.¹³ ✓ This approach enables the use of prompts for skipped items, which reduces the likelihood of missing data.⁸ ✓ Internet-based approaches offer several cost benefits for surveying and evaluating programs with large samples.^{12, 13}
<p>What are the drawbacks of this approach?</p> <ul style="list-style-type: none"> • Logistics and use • Cost 	<p>What the Research Says...</p> <ul style="list-style-type: none"> ✓ There are relatively few comprehensive reports about Internet-based surveys as a method of data collection with children.^{12, 17, 20} ✓ There is more potential for technical problems or theft with computer-based surveys (e.g., with laptops) as compared to written surveys.^{1, 16} ✓ Computer-based surveys require more logistics planning than do written surveys.²³ ✓ Computer-based surveying lacks the option of asking follow-up questions, like in an in-person interview.^{1, 6} ✓ Translation of computer-based surveys may require more resources than would be needed for a written survey if there is an audio component.¹⁶ ✓ There is relatively little research comparing written surveys and Internet-based surveys with children on issues related to confidentiality.¹³

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