IMPROVING
AGRICULTURAL
& RURAL STATISTICS
Global Strategy

Survey Solutions

Computer-Assisted Personal Interviews with Survey Solutions

Using mobile devices for cost-effective and faster data collection

What is CAPI about?

CAPI is a technology that uses mobile devices (such as personal digital assistants, laptops, tablets and smartphones) and Internet or cellular networks to assist interviewers in collecting data in the field. When using CAPI, interview cases are assigned remotely to data collectors in the field. Interview data are collected through electronic questionnaires on mobile devices and transmitted to survey headquarters for real-time quality control and analysis. CAPI also offers active data collection management tools such as automatic survey progress reports, which allow survey managers to monitor and organize fieldwork efficiently.

Why use CAPI
in agriculture data collection?

The use of CAPI is proven to reduce data collection costs over time while improving the quality and timeliness of statistical products. Because it eliminates several steps in traditional PAPI data production (such as printing, data entry and physical management of the questionnaires), CAPI dramatically reduces the time lag between data collection and data analysis. It is cost-effective because the initial costs of the necessary equipment and capacity are rapidly offset by the elimination or reduction of printing, storage and data entry costs.

Overall data quality is improved because the use of electronic questionnaires enables automatic skip patterns and response quality checks during the interviews. Data validation can be done during data collection, as the information is ready for statistical analysis as soon as an interview is completed. In addition, because CAPI uses mobile devices, it also allows data producers to integrate various features of these devices in data collection.

CAPI facilitates timely, quality, cost-effective statistics production for policy-making

What are the benefits of CAPI compared to PAPI data collection?

Studies have proved that CAPI-based surveys are more cost-effective, faster and of higher quality than PAPI-based surveys	CAPI	PAPI
QUALITY		
Multiple question types	yes	yes
Error & response quality checks	automatic, high precision	manual, low precision
Survey progress monitoring	real time over cellular/internet networks	manual, at end of survey round
Capturing of images, sound, video, GPS position, etc.	yes	no, needs external devices
TIMELINESS		
Question skip	automatic, high speed	manual, slow
Interview case assignment to data collectors in field	electronic, real time over cellular/internet networks	paper-based, slow by hand
On-field location of interview case	fast, assisted by automatic inbuilt map in tablet	slow, paper-based
Finished interview transmission to headquarters	electronic, real-time over cellular/internet networks	paper-based, slow by hand
Off-network operation capability	yes	yes
COST		
Printing	very minimum	very large
Paper storage & data entry	no	yes
Acquisition and maintenance of server & tablet devices	free- to low-cost cloud servers available, tablets last long if handled with care , mobile device prices have continued to fall	no
Field staff training	yes	yes

All-in-one CAPI software: Survey Solutions

Survey Solutions is a completely free-of-charge data collection, survey management and data management software designed to be easy to learn and operated with minimal technical assistance. Survey Solutions is preferable compared to other CAPI software because it combines the functionalities of data capturing, survey management and data management in a tool that is simple and straightforward, yet sufficiently powerful for use in small- and large-scale surveys.

Creates questionnaires

- Develops questionnaire content – modules, rosters, questions, etc.
- Creates skip patterns and validation checks
- Available free-of-charge online: https://solutions.worldbank.org/
- Incorporates reference tasks for quality checks

Pretests questionnaires

- Receives the draft questionnaire from designer and checks errors in questionnaire by allowing user to run the questionnaire in tablet or browser as in real survey
- Works on Android-based tablets and tester app can be downloaded for free from the Google Play app store

Centralized and field-based survey management

- Defines the survey project – survey staff, sample, questionnaire, case assignment
- Manages workload – assigns cases to supervisors, interviewers, receives progress reports, approves or rejects finished interview cases
- Quality control – reviews supervisors' and interviewers' work
- Manages and exports data to SPSS, STATA, etc.
- Centralized survey management is operated online using free Cloud server or local server
- Field-Based survey management is operated online

Data collection

- Receives case assignments – new questionnaires, new interview cases from HQs or supervisor
- Collects data from respondents
- Submits case assignment – confirms that all questions are answered, sends completed assignment for review
- Functionality to add photo attachments to interviews using the tablet's built-in camera for identification and complementary documentation purposes
- Capability of loading satellite imagery on tablets to improve field logistics and automate the area measurement of plots or parcels
- Works on Android-based tablet devices
- Transmits data online over network connected to HQ and interviewer. Also works offline, later synchronizing data with HQ and interviewer once network is available
- Application can be downloaded for free

Additional features of Survey Solutions

- Allows the creation of Computed Assisted Web Interviewing (CAWI) data collection (i.e. self-enumeration interviews conducted online through an Internet browser)

Resource requirements for a successful use of CAPI with Survey Solutions

TABLETS

01

Android Devices for Data Collection
- KNOWN ANDROID DEVICES
- 7- OR 8-INCH SCREEN
- GPS-ENABLED
- 3G OR 4G CONNECTIVITY
- LONG BATTERY LIFE
- CHARGING SOURCES: GRID ELECTRICITY, SOLAR OR ELECTRICITY GENERATOR, PORTABLE CHARGER, POWER BANK, ETC.

SERVERS

02

Server with Internet Access
- INTERNET-CONNECTED
- MUST HAVE INSTALLED SUSO SOFTWARE (AVAILABLE FOR FREE)
- CAN BE HOSTED IN PAID-FOR CLOUD SERVER OR OWN LOCAL SERVER
- CAN BE HOSTED FREE IN SURVEY SOLUTIONS SERVER AT WORLD BANK

NETWORK

03

3G or 4G Cellular Network Internet
- 3G OR 4G CELLULAR NETWORK
- WIFI INTERNET CONNECTION
- TRANSMISSION OF DATA FROM TABLET: REAL-TIME OR ONCE NETWORK IS AVAILABLE

PROGRAMS

04

Other Programs and Applications
- ALLOWS DATA EXCHANGES
- FACILITATES DATA ANALYSIS

PEOPLE

05

People with Survey Experience
- SUPERVISORS, INTERVIEWERS WITH SURVEY EXPERIENCE
- BASIC IT SKILLS
- SKILLED SERVER ADMINISTRATOR AT HQ

LOWER-COST, FASTER AND HIGHER-QUALITY DATA THROUGH REAL-TIME TABLET-BASED INTERVIEW DATA COLLECTION, RESPONSE QUALITY CHECK, SURVEY PROGRESS REPORTING AND DATA EXPORT FOR ANALYSIS…

Training in CAPI

One of the main barriers to the adoption of CAPI data collection is the extent of capacity building required to adapt the statistics production process.

To assist data producers in acquiring the necessary knowledge and skills to use CAPI to produce agricultural and rural statistics, the Global Strategy has developed an e-learning tool and training material on the use of Survey Solutions for agricultural surveys. Through its network of regional partners, the Global Strategy conducts Survey Solutions training regularly.

The World Bank also provides training on a regular basis and disseminates useful information on Survey Solutions through the dedicated website and Facebook page.

Who should receive training?

Decision-makers, survey managers, questionnaire designers, trainers of field staff, data analysts as well as students and teachers in statistical training centres.

- Consult the Survey Solutions webpage: http://support.mysurvey.solutions/
- Access and download free training and advocacy materials on CAPI from the Global Strategy website: http://gsars.org/en/tag/datacollection/
- Take the free online training course on CAPI prepared by GSARS in collaboration with the World Bank: http://www.gsars.org/e-learning/index.html.
- Keep in touch with the Survey Solutions community through the World Bank's Facebook page: @mysurveysolutions

WHERE SHOULD I START?

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CAPI e-learning course on Using Computer Assisted Personal Interviewing for Agricultural Surveys
http://www.gsars.org/e-learning/index.html

In-Classroom Training Course on CAPI - English
http://gsars.org/en/training-course-on-capi-english/#more-3127

In-Classroom Training Course on CAPI - French
http://gsars.org/en/training-course-on-capi-french/#more-3308