The iPad® Computer-Assisted Personal Interview System – A Revolution for In-Person Data Capture?

November 6, 2013

Heather Driscoll, M.S.
James Dayton, M.B.A.

2013 FCSM Conference
Washington, DC
Presentation Outline

- iPad® Computer-Assisted Personal Interview (iCAPI) System
- iCAPI in the Field
- iCAPI Evaluating Results/Project Takeaways
- Is iCAPI Right for Your Project?
- Looking Ahead
iPad® Computer-Assisted Personal Interview System (iCAPI)

- **iCAPI (i·kap·e), n.**
  - An iPad® data collection tool that replaces traditional pencil and paper methods

**Potential Advantages**
- No printing costs
- No data entry/scanning
- Improved data quality
- GPS navigation capabilities
- Real time quota tracking
- Increased data security

**Anticipated Challenges**
- Field viability (ex: battery life, weather conditions, etc.)
- Increased interview time
- Increased programming time
- Training
- Device security
- Connectivity
iCAPI In the Field

- Fisheries Pilot Tests
  - Large-scale intercept survey of recreational saltwater anglers
  - Beaches, docks, marinas

- Pennsylvania Water Trails Survey
  - Economic impact study of designated Water Trails
  - River access points

- Context Scan Study (Pricing Component)
  - Observation of geographic access to specific food and promotion of healthy and less healthy foods
  - Grocery stores and convenience stores
**Pilot Tests – Fisheries Intercept**

**Goal** - Determine feasibility of iCAPI for large-scale fisheries intercept survey, including suitability for field conditions, impact on data quality, and cost.

**Pilot Test Phase I: Observational Data**
- Tested – Functionality
- Data collected
  - Fishing site descriptions
  - Vessel observations
- 1st Generation iPad®
- Web-based survey, SPSS Dimensions

**Pilot Test Phase II: Catch Data**
- Tested - Productivity (Cost)
  - Interviews per assignment
- Data collected
  - Selecting fish species
  - Recording number of fish
  - Recording weights/lengths
  - Grouped catch
- 1st Generation iPad®
- Custom Apple app
Pennsylvania Water Trails Economic Impact Study

**Goal** - Estimate the direct, indirect and induced economic impact of water trail visitors on Pennsylvania's economy.

**Method** - Expenditure survey conducted through intercept interviews at randomly selected access sites.
- 6 weeks of data collection during summer months
- Remote, rural and urban locations

**Mode** - In-person interviews using iCAPI data collection via a customized application with 2nd generation iPads®.
- 7 iCAPI local interviewers
- Collected 350 in-person interviews
Context Scan Study – Pricing Component

**Goal** – Assess the availability, pricing and promotion of healthy/less healthy food items

**Method** – Observation at 450 sampled grocery and convenience stores.
- 15 awardee communities in the National Evaluation of CDC's Community Transformation Grant Program
- 30 stores per community (12 grocery, 18 convenience)
- 15 weeks of data collection
- Remote, rural and urban locations

**Mode** - In-person observation using iCAPI data collection via Askia Software application with 2nd generation iPads®.
Evaluating Results

Quantitative – Fisheries Pilots
iPad® performed as well or better than paper:
- Interviews per assignment
- Recording number of fish
- Recording fish length and weight
- Number of errors

Qualitative – All Projects
Praise for the iPad®
- Easy to use
- Ability to withstand field conditions

Criticism of iPad®
- Glare
- Speed
- Difficulty holding the iPad®
- Typing
iCAPI Project Takeaways - Benefits

- **Performance**
  - Demonstrated field durability
  - Instant data transfer
    - Secure data storage if connection is lost
  - Improved communication and navigation in the field
  - Efficient supervision of staff with real-time communication, iPad® tracking
  - Staff enthusiasm

- **Improved data quality**
  - Survey program reduced interviewer error

- **Project cost savings**
  - Printing/postage costs *(also greener!)*
  - Data entry costs
  - Staff time to investigate and resolve possible errors
iCAPI Project Takeaways - Drawbacks

- **Project cost**
  - Initial cost of iPads® and accessories
  - Data plan for 3G connectivity
  - Programming

- **Hardware limitations**
  - Glare
  - Typing
Is iCAPI Right for Your Project?

- iCAPI cost effectiveness ultimately depends on layers of scale
  - Project scope
  - iPad® survey development and programming
  - Timeline of future iCAPI projects

- Geographic location and connectivity can be a driver for iCAPI survey design
  - Web-based survey vs. custom application
  - Survey environment
  - Data Plan vs. Wi-Fi

- Intangibles
  - Will an interviewer with an iPad® increase respondent curiosity/response rate?
  - Will green technology appeal?
  - Increase interviewer engagement?
Looking Ahead – Rapidly Changing Market

- **Hardware**
  - Cheaper tablets and tablet technology has become available
  - Does the depreciation of the iPad® or other tablet technology present a cost-prohibitive driver for expanded use?

- **Software**
  - Will off-the-shelf survey development software provide capability to design effective, tailored instruments?
  - Programming across a large variety of hardware - Apple vs. Android
Questions?

Heather Driscoll
Principal
Heather.Driscoll@icfi.com
802.264.3706

Jamie Dayton
Sr. Vice President
James.Dayton@icfi.com
802.264.3723