Observational Research: A Tool for Collecting Behavioral Data and Validating surveys

Sandria Godwin, Ph.D.
Tennessee State University
And

Edgar Chambers IV, Ph.D.
Sensory Analysis Center, Kansas State University

The content of this presentation is best understood in combination with the proceedings paper from the SPISE 2009 Conference. The proceedings can be accessed through http://www.hecum.edu.vn/spise2009/
What is Observational Research?

- Direct observation or measurement of behavior

- Examples:
  - Watching people interact with products or each other
  - Taking measurements of consumer behavior (e.g. use, preparation) to gather facts
Determine if Observational Research is Needed: Set Objectives

- Examples of Objectives for Observational Studies
  - Learn how a product actually is used
  - Discover in-use motivations
  - Understand selection and purchase behavior
  - Document real benefits in-use
  - Understand environmental conditions influencing behavior or outcomes
  - Document what people do not know or remember
Observational Research to Develop Guided Questionnaires

- Objective: Understand food preparation practices that allow cross contamination of bacteria.
- To develop the questionnaire/checklist, people were observed preparing a meat dish for dinner.
- More than 20 behaviors not previously considered were observed and added to the questionnaire/checklist for the final survey.

- Godwin, Chen & Kilonzo-Nthenge, 2009
Observational Research to Measure what Consumers Cannot Tell

- Objective: Determine temperatures in home refrigerators
- In home observation is necessary because people do not know this information. ½ had no idea, ¼ admitted they were just guessing, and more than half didn’t have a thermometer in the refrigerator to even be able to look up the temperature.
- In home research allowed us to measure temperature.

Observational Research to Validate Reported Measures

- Objective: Determine how controlled the mixing of a medical food is in Nursing Institutions.
- Staff in 10 institutions considered themselves well-trained in preparation and in the health reasons for mixing properly (average >7 on a 9-point scale).
- Actual measurements showed that only 7-15% of staff could mix the product correctly every time.
- More than 40% never mixed the product to a correct thickness.

Garcia, J., Chambers, E. IV, Clark, M., Helversen, J., and Matta, Z. 2009
What to observe

- Depends on the objective
  - What is around you
  - How many people, age, gender, ethnicity
  - What is being done
  - Compare/contrast people, flow, actions, body language
  - Map of location
  - Inventories of objects
  - Use your senses – see, hear, touch, smell, taste
Observation is only as good as the consumers you target

- Specifications are similar to other forms, but often you automatically choose people who are in an “on-location” setting if they are the target.
- If you actually select people in advance they should represent your target.
Observational Research

• Biases
  – Personal
  – Perception vs. reality
  – Objective vs. subjective

• Time
  – Observation is considerably more time consuming than surveys
    • Time to observe and collect data
    • Time to code and analyze data
Memory Game

- Tall
- lion
- Green
- hands
- car
- Door
- Dice
Words on the previous slide

- How many words were there?
- List them
- Put them in order
- Which ones were capitalized?

- It is hard to remember the words, much less put them in order. Taking notes is critical in observational research.
• When you are doing observational research, memory is critical!
  – Pay Attention
  – Visualize
  – Jot down notes
  – Recreate step-by-step, organize
  – Standardize, but allow flexibility when necessary
  – Use multiple senses – see, hear, write, smell, taste, touch
  – Jot down a quick map or other visual

• Plan
We will play the game again – using pictures to help
Memory Game

- Tall
Memory Game

- Lion
Memory Game

- Green
Memory Game

- Hands
Memory Game

- Car
Memory Game

- Door
Memory Game

- Dice
Information on the Photographs

- What was the color of the tall man’s pants?
- Which way was the lion facing?
- How many arrow stripes were on the side of the car?
- How many dots were facing up on the left dice?
- Notice the questions changed – the objective must be different. It is essential to know the objective in order to know what aspects to concentrate on.
• Observational research can enhance the information we gather about products, services, and consumers if it is carefully planned.
• In some cases observational research is the only way to collect valid data.
• It is essential that training be provided to those who will collect observational data and that the analysis and interpretation of the data be considered carefully.
Thank you!