Observation

Observation

- Goals:
  - Describe setting, events, and persons
  - Analyze the categories that emerge
  - Investigator must interpret what occurred
  - Generate hypotheses that help explain the data
  - Write a final report of results
  - Needs accurate descriptions and objective interpretation

Why Observe?

- Allows the investigator to study people in their 'natural setting' without their behaviour being influenced by the presence of a investigator
- Usually consists of detailed information about particular groups or situations
- Can provide a deeper, richer, understanding than survey

Scientific Observation

"YOU SEE, BUT YOU DO NOT OBSERVE."
- Sherlock Holmes

- **Scientific Observation** is the systematic process of recording the behavioral patterns of people, objects, and occurrences without questioning or communicating with them.

When is Observation Scientific?

- and occurrences without questioning or communicating with them.
- There are four conditions for scientific observation:
  - Serves a formulated purpose
  - Planned systematically
  - Recorded systematically
  - Subjected to checks or controls on validity and reliability

Characteristics of Observation

- Both a physical and a mental activity
  - Eye ‘catches’ many things which are sighted, but attention is focused on data that are pertinent to the given study
- Selective
  - Investigator does not observe anything and everything, but rather selects a range of things to be observed on the basis of the nature, scope and objectives of their study
- Purposive and not casual
  - Made for the specific purpose of noting things relevant to the study.
- Captures the natural social context in which persons’ behaviour occurs

What can be observed?

Phenomenon	**Example**
• Human behavior or physical	• Shoppers movement action pattern in a store
• Verbal behavior	• Statements made by airline travelers who wait in line
• Expressive behavior	• Facial expressions, tone of voice, and other form of body language

What can be observed?

Phenomenon	Example
• Spatial relations	• How close visitors at an and locations art museum stand to paintings
• Temporal patterns	• How long fast-food customers wait for their order to be served
• Physical Objects	• What brand name items are stored in consumers' kitchens
• Verbal and Pictorial	• Barcodes on products

Types of Observation

- Human versus mechanical observation
  - Mechanical observation is situation in which video cameras, traffic counters, and other machines help observe and record behavior.

Types of Observation

- Visible versus hidden observation
  - Visible observation is situation in which the observer's presence is known to the subject.
  - Hidden observation is situation in which the subject is unaware that observation is taking place.

Types of Observation

- Direct versus scientifically contrived observation
  - Direct observation is a straightforward attempt to observe and record what naturally occurs; the investigator does not create artificial situation.
  - Contrived observation is observation in which the investigator creates an artificial environment in order to test a hypothesis.

Complete Participant

- Observer is a part of the phenomenon or group which observed and he acts as both an observer and a participant.
  - The people who are observed should not be aware of the investigator's purpose - their behaviour will be 'natural.'

Participant as Observer

- Observer is a part of the phenomenon or group which is observed
- Group is aware of the purpose
- Can participate but more interested in observing than participating

Complete Observer

- Observer stands apart and does not participate in the phenomenon observed.
- Completely hidden from view or in plain sight in a public setting
- Stance is unobtrusive and unknown to audience being observed.
- No emotional involvement on the part of the observer.

Variations in Approaches to Observation

Role of the Observer		
Full-participant observation	Partial participation	Onlooker; observer is an outsider
How the Observer Is Portrayed to Others		
Participants know that observations are being made and they know who is making them.	Some but not all of the participants know the observer.	Participants do not know that observations are being made or that there is someone observing them.
How the Purpose of the Observation Is Portrayed to Others		
The purpose of the observation is fully explained to all involved.	The purpose of the observation is explained to some of the participants.	No explanation is given to any of the participants.	False explanations are given; participants are deceived about the purpose of the observation.
Duration of the Observations		
A single observation of limited duration (e.g., 30 minutes).	Multiple observations; long-term duration (e.g., months, even years).	
Focus of the Observations		
Narrow focus: Only a single element or characteristic is observed.	Broad focus: Holistic view of the activity or characteristic being observed and all of its elements is sought.	

Observer Effect

- The presence of an observer can have a considerable effect on the behavior of those being observed, and affect the outcome of the study
- Unless a observer is concealed, it is quite likely that they will have some form of effect upon the individuals being observed

Observer Bias

- Refers to the possibility that certain characteristics or ideas of observers may bias what they “see”
- Comparing notes or impressions among other observers assists in reducing this threat

Advantages of Observation

- Communication with respondent is not necessary
- Data without distortions due to self-report (e.g.: without social desirability)
- No need to rely on respondent's memory
- Nonverbal behavior data may be obtained
- Certain data may be obtained more quickly
- Environmental conditions may be recorded
- May be combined with survey to provide supplemental evidence

Disadvantages of Observation

- Cognitive phenomena cannot be observed
- Interpretation of data may be a problem
- Not all activity can be recorded
- Only short periods can be observed
- Observer bias possible
- Possible invasion of privacy

Planning Observation

1. Identify the specific questions which call for use of observation method
2. Decide the observation content, specific conditions, events and activities that have to be observed for the required data
3. The observation setting, the subjects to be observed, the timing and mode of observation, recording procedure, recording instruments to be used, and other details of the task should be determined.

Observation tools and recording devices

- Observation guides
- Recording sheets or checklist
- Schedule
- Field observation log
- Mechanical devices

Observation Guides

- Printed forms that provide space for recording observations.
- Useful when several observers are involved or when you wish to obtain comparable information from several sites/ observation points or observations of many people.
- The more structured the guide, the easier it will be to tally the results.

Recording Sheets

- Used to record observations as in YES/NO option (present – not present) or on a rating scale to indicate extent or quality of something.
- Checklists are used when there are specific, observable items, actions or attributes to be observed.

Schedule

- Data requirements are identified by analyzing the core of the problem, the objectives of the study, the investigative questions, hypothesis and the operational definition of concepts and out of the data requirements, items of data to be collected through observation are identified.
- A schedule is then constructed, covering those items of data.

Field Observation Log

- May take the form of a diary or cards. Each item of observation is recorded under appropriate subheading.
- At the time of observation, rough noting may be made, and at the end of the day, fully log may be made. The card system is flexible and facilitates arrangement and re-arrangement of items in any desired order.

Mechanical Devices

- E.g. cameras, tape recorders, videotape and electronic devices.
- Records can be analyzed later and may be used to illustrate your evaluation report.

In Class Exercise

- Under what conditions might you use observation as a user research method?
- Under what conditions might you use interviews as a user research method?
- In what ways could you combine both methods to carry out user research?

Observation Exercise

- Choose a site for observing for approximately 10 mins.
- This should be consistent observation—that is, if you are going to observe at a restaurant, the observation should not be while you are eating (especially with another person). You want to really be able to observe.
- Once you have completed your observation:
  - Write up your field notes should be in paragraphs, single spaced with blank lines b/t paragraphs.
  - Try to include more than just the visual sense.
  - Be sure to separate observations from interpretations as you write! But it is fine to include interpretations.