Chapter 1: Thinking Like a Researcher

→ The Scientific Method

. Structured approach researchers follow to address issues critically

. Stages:

1) Encounter Problem
2) State Problems Clearly
3) Propose Hypotheses
4) Deduce Expected Outcomes
5) Formulate Rival (Alternative) Hypothesis
6) Devise and Conduct Empirical Tests (اختبارات تجريبية)
7) Draw Conclusions Based on Findings

. Curiosity is a fundamental trait for business researcher

→ Sound Reasoning

. Effective reasoning is essential across various discourse : Exposition (عرض) / Argument (مناقشة)

→ Type of Reasoning

1) Deductive : Start with a general statement / hypothesis and examine the possibilities to reach a specific, logical conclusion

2) Inductive : Start with specific observations and develop broader generalizations

→ Language of Research
- Operational Definitions
- Conceptual Schemas
- Variables
- Constructs
- Concepts
- Models
- Theory
- Hypothesis

→ Success of Research
- Clear conceptualization of concepts
- Shared understanding of concepts

→ Variables
- Event / Act / Characteristic / Trait
- Types of var
  1) Dichotomous (ثنائي التفرع)
  2) Discrete
  3) Continuous

- Independent / Dependent Variables

IV	DV
Persumed cause	Persumed effect
Predictor	Criterion (معيار)
Stimulus (مثير)	Response
Manipulated	Measured outcome

. Moderating Variables : Affect the strength / direction of IV _ DV rlt
. Extraneous Variables : Uncontrolled var. that may confound results
. Intervening Variables : Explain how / why IV affects DV

→ Hypothesis
. Formats : Descriptive / Research Question
. Relational Hypotheses : Correlational / Causal

. Role :
→ Guide the direction of the study
→ Identify relevant facts
→ Suggest most appropriate research design
→ Provide a framework for organizing resulting conclusions

. Strong Hypothesis Charac. :
Adequate (مناسب)
Testable
Better than rivals

Chapter 2:

→ Problem Definition

Differentiating between managment decision problems (what to do?) and marketing research problems (what info is needed and how to get it?)

→ Defining Marketing Research Process

1) Importance of defining the problem
2) Process of defining the problem and developing an approach
   ↳ Tasks:
   - Discussions with DM (Decision Makers)
   - Interviews with Experts
   - Secondary data analysis
   - Qualitative research
3) Environmental Context of the problem
4) Management Decision Problem
5) Definition of the marketing research prob.
6) Approach to the problem
   ↳ Analytical frameworks / Models
   ↳ Research questions / hypothesis
   ↳ Specification of info needed
7) Research Design

→ Discussions with DM (2)

1) The Problem Audit

. Evaluation of marketing issue to understand its origin and nature

. Envolves reviewing history, alternative actions available, criteria to evaluate them, info needed to addres DM's questions

2) The 7 Cs of Interaction

. Effective interaction between the DM and researcher relies on:

1) Communication
2) Cooperation
3) Confidence
4) Candor
5) Closeness
6) Continuity
7) Creativity

(3) → Factors to be considered in the env. context of the prob.

1) Past Info and Forecasts
2) Resources and Constraints
3) objectives of DM
4) Buyer Behavior
5) Legal Environment
6) Economic "
7) Marketing / Tech Skills

(5) → Errors in Defining the problem

. Defined too broadly: lacks focus and actionable steps

. Defined too narrowly: Misses critical elements of the issue

→ Models (6)

. Analytical Model: Set of variables and their interrelationships
↳ represent some real system / process

. Verbal Models: Variables and their rlt. are stated in prose form

. Graphical Models: Visual. Used to isolate variable and to suggest directions of rlt.

. Mathematical Models: Explicitly specify the rlt. among variables in equation form
$y = a_0 + \sum a_i x_i$

y: degree of preference

a_0, a_i = parameters to estimate

→ Research questions and hypothesis (6)

. RQs: refined statements of the specific components of the problem

. Hypothesis: unproven statement about a factor that's of interest to the researcher

. Hypothesis is often a possible answer to the RQ.

→ Specification of Info needed (6)

By focusing on each component of the problem, analytical framework, models, RQs, and hypothesis, the researcher can determine what info should be obtained

Chapter 3: Research Design

→ **Research Design Definition**
Involves pre-decisions that act as the master plan, detailing methods and procedures for gathering and analyzing necessary information

→ **Importance of Research Design**
- A good research design is the first rule of a good research
- It allows advance planning, reducing time and costs.

→ **Objectives of research design**
- Gain background knowledge and develop hypotheses
- Measure the state of a variable of interest
- Test hypotheses regarding relationships between variables

→ **Types of research Design**

1) **Exploratory**: Conducted when little is know about the problem, focuses on background info, hypothesis generation and research prioritization

2) **Descriptive**: Answers "who / what / where / when / how / questions

3) **Causal**: Focuses on understanding a phenomenon in terms of conditional statements of the form if x, then y.
- Identify cause and effect rlt. through experiments

→ Exploratory Research Methods

1) Secondary data analysis : interpreting existing info. relevant to the research topic

2) Experience Surveys: Gathering info from experts about the issues relevant to the research topic

3) Case analysis: Review of available info about a former situations with similarities to the current problem

4) Focus Group: Small groups brought together and guided by a moderator through an unstructured discussion to gain info relevant to the research ~~topic~~ problem

→ Descriptive Research Classification

1) Cross-Sectional Studies : One-Time snapshot of a population sample

2) Longitudinal Studies : Repealedly measure the same sample of a pop. over time, capturing trends

3) Continuous panel : ask panel members same questions on each panel measurement

4) Discontinuous panel : Vary questions from one panel measurement to next.

→ Experiments

. Manipulating an independent var. to see how it affects a dependent var. while controlling the effect of additional extraneous variables

→ Independent / Dependent Variables

. IV: researcher has control over and wishes to manipulate (4 Ps)

. DV: Little / no direct control over, but have a strong interest in changing

→ Experimental Design

. Def: Procedure for devising an experiment setting such that a change in DV may be attributed solely to the change in IV

. Symboles:

1) O = measurement / observation of IV
2) X = Change of IV
3) R = Random assignment of subjects to experimental and control groups
4) E = experimental effect (change in DV due to the IV)

. Pretest: measurement of D.V taking before changing the I.V

. Posttest: measuring the D.V after changing the I.V

- True experimental Design: Control extraneous var.

- Quasi-experimental Design: less control

- An experiment is valid if:

Internal validity → The observed change in D.V is due to the I.V

External validity → The results apply to the real world outside experimental setting

- Types of experiments:

1) Laboratory: Conducted in artificial, controlled settings to manipulate I.V and minimize the influence of extraneous var.

2) Field: Conducted in natural setting wher I.V are manipulated and D.V are measured in real world conditions

→ Test Marketing

- Conducted in real-world setting to test product / service sales potential or marketing variations

- Types:

1) Standard: through the company normal distribution channels

2) Controlled: conducted by outside research firms that guarantee dist. of the product through prespecified types and nb. of distributors

3) Electronic: panel of costumers carry id cards that they presents when buying goods / services

4) Simulated (STMs): data on consumer response to a new product is fed into a model containing assumptions regarding planned marketing programs, which generates likely product sales volumes

- Criteria for selecting test markets:
  1) representativeness
  2) Isolation → Degree of
  3) ~~Controllability~~ Ability to control distribution and promotio

- Pros / Cons of Test Marketing
  1) Pros: Accurate sales forecasts and pretesting of variables (تجنب الفشل)
  2) Cons: Vulnerability to competitive sabotage (تخريب), exposure to competition and ethical issues.

Chapter 4: Exploratory Research Design: Secondary Data

→ Criteria for Secondary Data

1) Specifications: Methodology used to collect data
2) Error: Accuracy of data
3) Currency: When / where data is collected
4) Objectives: Purpose for which data is collected
5) Nature: Content of data
6) Dependability: How dependable are the data

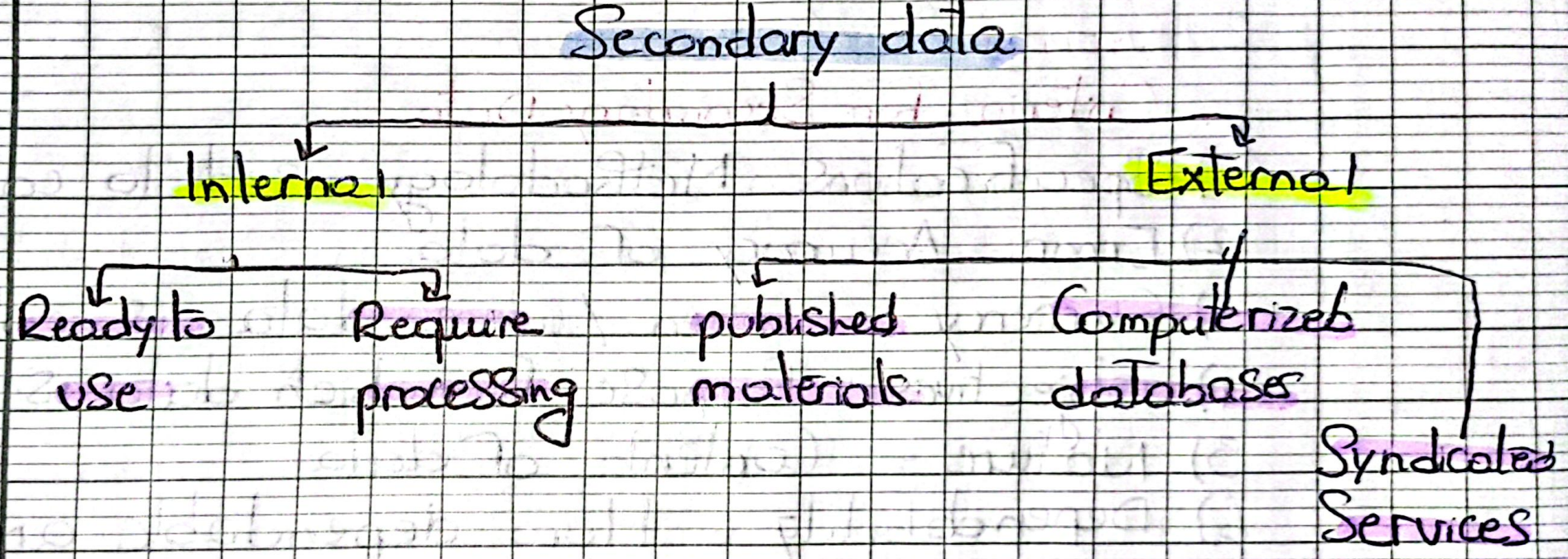
→ Primary vs. Secondary Data

- Primary: Collected directly by the researcher to address a specific problem
- Secondary: Pre-existing data for other purposes

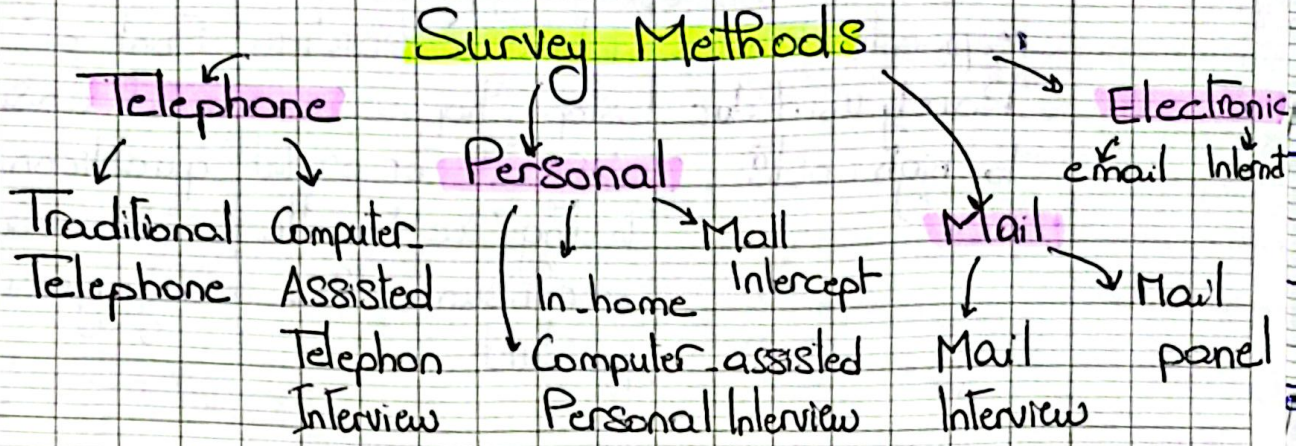
→ Use of secondary data

1) Identify the problem
2) Better define the problem
3) Develop an approach to the problem
4) Formulate appropriate research design
5) Answer certain research questions and test some hypothesis
6) Interpret primary data more insightfully

→ Classification of Secondary data



Chapter 6: Descriptive Research Design: Survey and Observation



→ Survey collect data using a structured questionnaire asked in a pre-arranged order

Advantages
- Simple to administer
- Reliable data collection
- Easy to code and analyze

Disadvantages
- Respondents may be unwilling / unable to answer
- Wording of questions is hard

→ Methods

A) Telephone Interviews

Traditional Telephone Interviews
- Call respondents and ask questions
- Uses paper-pencil questionnaire

Computer-Assisted Telephone Interviewing (CATI)
- Uses computerized quest.
- record answer into the computer
- one question at a time appears on the screen
- Questionnaire can be personalized

B) Personal Interviews:

In Home
- Conducted in the respondent's home
- Rarely used due to high costs

Mall Intercept
- In shopping malls where researchers stop shoppers
- Useful for product testing (see, handle or consume the product.

CAPI
- Respondent sits in front of computer and answers a questionnair
- Increases respondent engagement

C) Mail Surveys

Traditional Mail
- Questionnaires are mailed to pre-selected respondents
- Includes cover letter, return envelope, incentive
- No verbal Interaction

Mail Panel
- Pre-selected households agree to participate in multiple surveys over time
- Useful for longitudinal studies

D) Electronic Surveys

E-Mail
- Generate list of e-mail addresses
- Survey sent direclty in the email body
- Requires manual data entry after responses are received
- limited (Skip pattems / randomization, length)

Internet Surveys
- Hosted on websites using HTML Forms
- prevent multiple response for same user
- Skip patterns
- respondents recruitment: on-line, mail, telephone visitors

→ Criteria for Evaluating Survey Methods

1. Flexibility of Data Collection
The extent to which the respondent can interact with the interviewer and the questionnaire
→ Highest: personal interview methods (Face-to-face)
→ Moderate: Traditional Telephone interview, CATI, CAPI, Internet surveys. (can personalize/use skip pattern)
→ Low Flexibility: Mail Surveys, email surveys, mail panels (no real-time interaction)

2. Diversity of Questions
The degree of interaction with the interviewer / The respondent's ability to actually see questions
→ Most diverse: In home, mall-intercept, CAPI
→ Moderate: Internet surveys
→ Limited: Mail, email
→ Least diversity: Traditional telephone surveys

3. Use of Physical Stimuli
Want respondents to view and react to a stimuli (e.g. product, ad)
→ Best: Mall-intercept, CAPI
→ Moderate: Mail surveys, Mail panel
→ Limited: Telephone, email surveys

4. Sample Control
Direct the survey to the right person
→ Best: In-home Interviews (hight control)
→ Moderate: Mall intercept
→ Moderate to hight: Telephone methods
→ Low: Mail Surveys (respondents may ignore)
→ Very Low: Internet Surveys (anyone can respond, difficult to verify identity)

5- Response Rate
% of completed Interviews
→ Highest: personal (>80%)
→ Moderate: Telephone (60-80%)
→ Poor: Mail (<15%)

6- Speed
Fastest
- Internet survey, e-mail survey
- Telephone Methods
- mall intercept, computer-assisted interviews
- in-home interview
Slowest
- mail surveys, mail panel

7- Cost
Lowest: Internet Surveys
Highest: In home personal interviews