CHAPTER THREE METHODOLOGY

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Portfolio Preparation & Graduation Thesis Study

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Outline

- **Objectives**
- **Outcomes**
- **Introduction to the methodology**
- **Types of Research Methodologies**
- **Data Collection**
- **Questionnaire**
- **Pilot Study**
- **Chapter Structure and Evaluation**
- **Homework**

Objectives

- Define methodology and select appropriate research approaches
- Transform the theoretical framework into research questionnaires
- Plan and conduct pilot studies for research validation

Outcomes

- **Knowledge:** Understanding of research methodology principles
- **Skills:** Ability to design research instruments
- **Application:** Connect theory to design practice

1. Introduction
What is Methodology?

Methodology is your research roadmap

Methodology is your plan for conducting research.

• HOW you will gather information
• WHAT tools you will use
• WHY you chose these specific approaches
• HOW you will analyze your findings
Methodology = Is a step-by-step plan to answer the research question
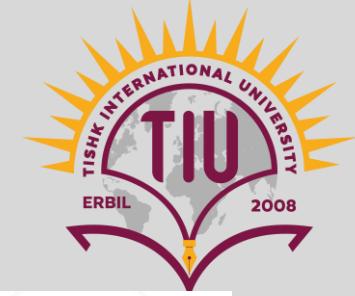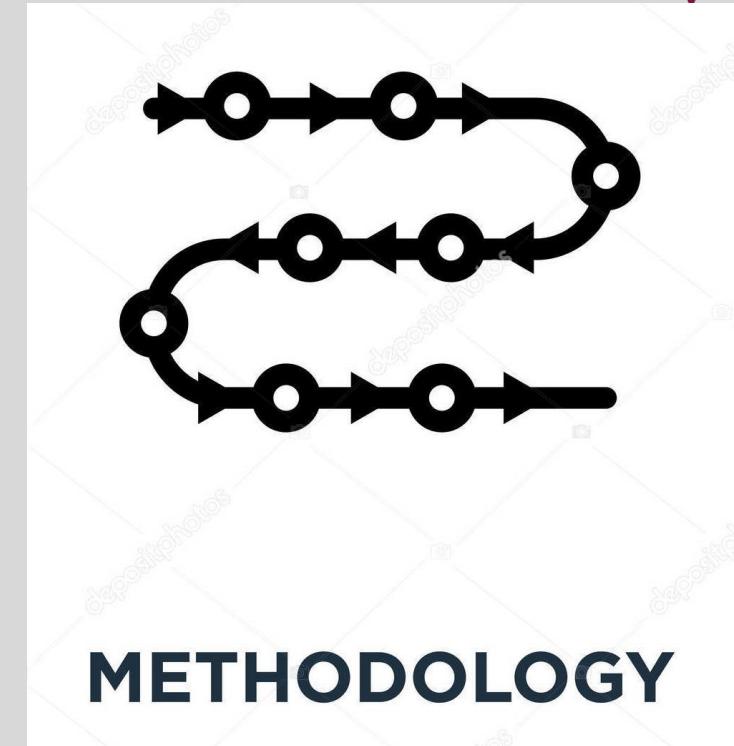
METHODOLOGY

2. Research Methodologies

- **Quantitative Methodology**

- **Qualitative Methodology**

- **Mixed Methodology**

2. Research Methodologies

Quantitative Methodology

- ✓ **Is a** Research that deals with **numbers, measurements, and statistics.**

- ✓ **Perfect for:** Measuring space usage, lighting levels, temperature, user satisfaction ratings, budget analysis.

Quantitative Research

- ✓ **Space measurements**
- ✓ **Cost calculations**
- ✓ **Environmental data (lighting, acoustics)**

2. Research Methodologies

Qualitative Methodology

Research that focuses on understanding experiences, opinions, and behaviors through **words and observations**.

Perfect for: Understanding user needs, cultural preferences, design meanings, and subjective experiences of spaces.

Types of Qualitative Research Methods

In-Depth Interviews   Focus Groups   Surveys

Observations   Secondary Research

2. Research Methodologies

Mixed Methodology

Combining both quantitative and qualitative approaches for a complete picture.
Perfect for: Getting both the "**numbers**" and the "**stories**" behind your design decisions.
It contains:
✓ **Surveys + interviews**
✓ **Measurements + observations**
✓ **Statistics + user stories**
✓ **Design testing + feedback sessions**

2. Data Collection

✓ Data collection is the process of gathering information to answer your research question.

✓ You're collecting information about user needs, spatial requirements, and cultural considerations that will inform your design decisions.

Note: Each piece of data you collect should help answer your research question!

DATA COLLECTION

2. Data Collection

- ✓ In this section, you have to write:
1. Explain **WHY** you're collecting data and **HOW** it connects to your research question.
2. Detail **WHAT** data collection methods you're using (questionnaire, interviews, observations, etc.).
3. Describe **HOW** you will collect the data (online, face-to-face, location, timing).

2. Data Collection

✓ There are two types of data

1. Primary data

Primary data is the information that researchers collect directly for their specific purpose. It's original data gathered first-hand by the researcher.

2. Secondary data

Secondary data refers to information that has already been collected by someone else for a purpose other than its current use. Researchers use this existing data for their own studies.

Primary Data VS Secondary Data

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Criteria	Primary Date	Secondary Data
Source	Collected firsthand by researcher	Collected by others
Purpose	Specific to current research	May have different original purpose
Time	Takes longer to collect	Quickly available
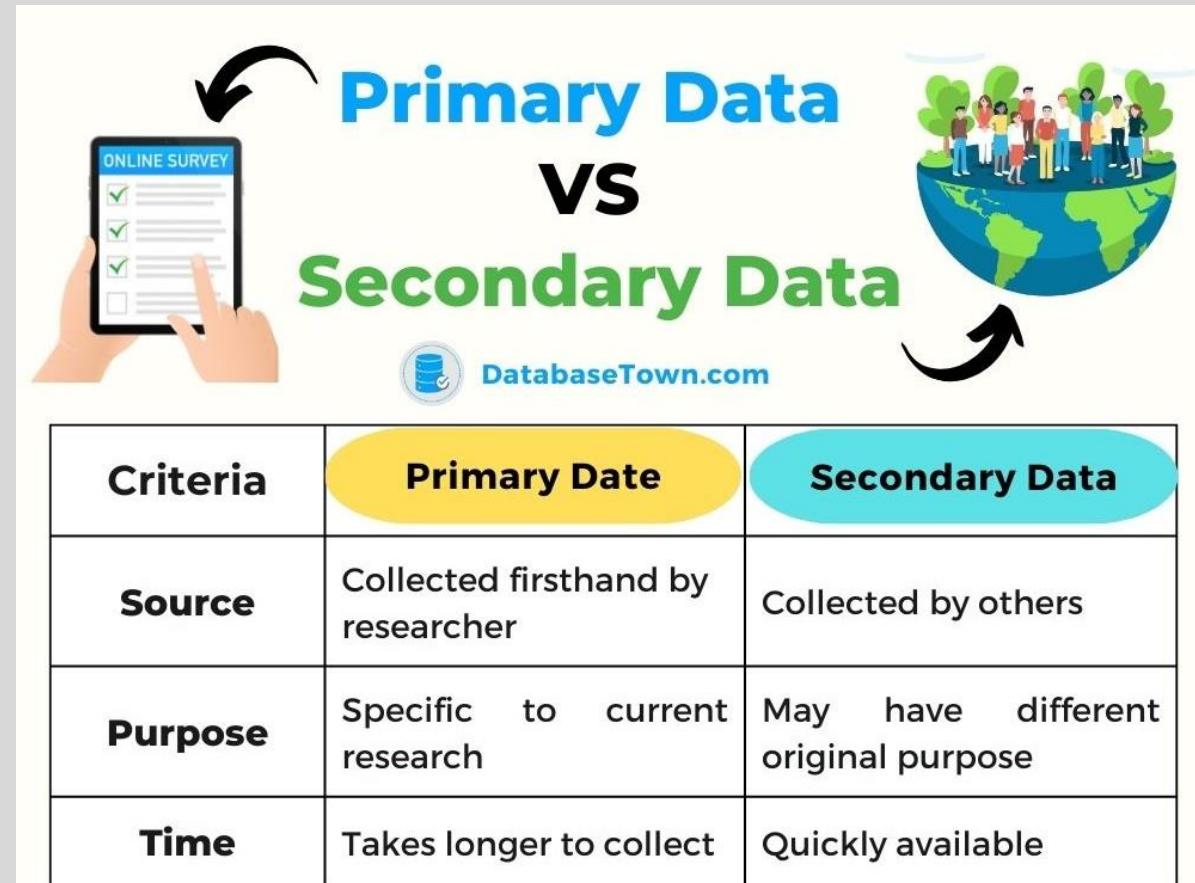
2. Data Collection
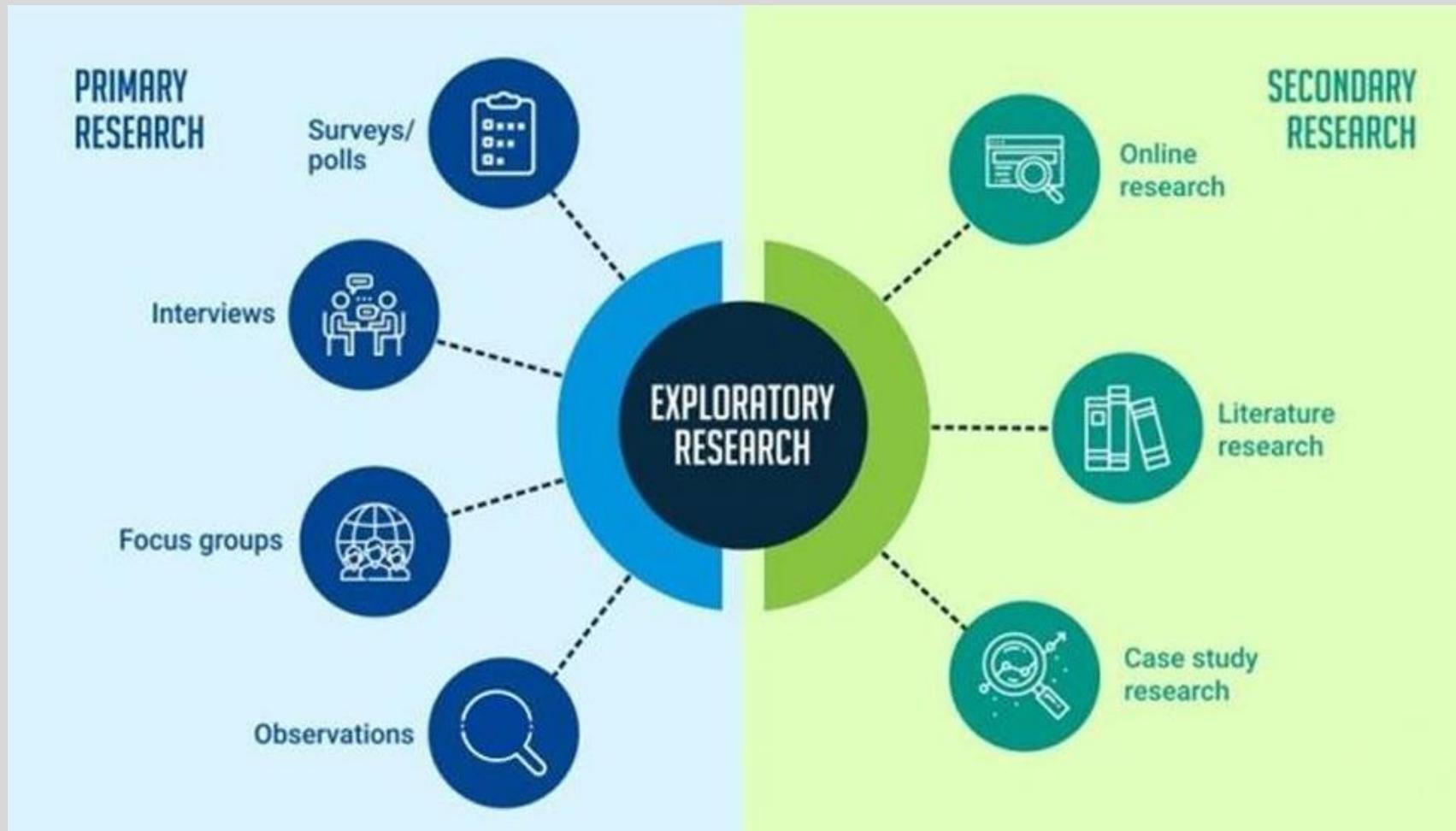
3. Questionnaire

✓ A questionnaire is like a structured conversation with the users. It's a set of **carefully planned questions** that help you gather specific information you need for your design project.

✓ **It's better to extract your questions from your theoretical framework**

Note: The Questionnaire is the primary data

How to Extract Questionnaire from Your Theoretical Framework:

1. Transform each concept in your theoretical framework into specific questions.
2. Use rating scales (1-5), multiple choice, yes/no, or open-ended questions based on what information you need.
3. Group related questions together and test your questionnaire with a few people before using it in your research.

Note: Your theoretical framework is like a recipe - it tells you what "ingredients" (concepts) are important. Your questionnaire is how you "measure" these ingredients in real life!

Example

Main Variable	Sub-Variables
Cultural Museum	• Identity Building • Representation of Culture • Museum as Social Space
Preservation	• Tangible Heritage (artifacts, architecture) • Intangible Heritage (language, traditions) • Sustainable Conservation Practices
Kurdish Heritage	• Vernacular Architecture • Traditions & Customs • Oral Culture & Memory
Visitor Experience	• Learning & Engagement • Interactivity & Immersion • Social & Emotional Connection

Main Concepts

For each main concept, create a group of related questions. For example, under the **Cultural Museum** concept, questions should focus on themes such as **Identity**, **Representation of Culture**, and **Social Space**. Similarly, for the other concepts, identify their key themes and develop corresponding question groups to ensure that all aspects of the concept are addressed.

Example

Let's try the Cultural Museum Concept:

Based on the theoretical framework, cultural Museums are spaces of **cultural representation, shaping collective memory and identity, the first question can be as follow:**

Q1. How important is it for a Kurdish cultural museum to help build visitors' cultural identity? (Likert Scale)

o   Not Important
o   Slightly Important
o   Moderately Important
o   Very Important
o   Extremely Important

Or..
Example

Q1. What design elements should a Kurdish cultural museum include to help visitors connect with their cultural identity? (open ended)

………………………………………………………………………………………………

Example

Q2. How important is accurate cultural representation in the interior design of a Kurdish museum?
- o Not Important
- o Slightly Important
- o Moderately Important
- o Very Important
- o Extremely Important

Q3. Which cultural aspects should be prioritized in the museum's interior design? (Select up to 3)
- o Traditional Art Displays
- o Music & Performance Spaces
- o Traditional Clothing Exhibits
- o Food Culture Areas
- o Language & Literature Sections
- o Religious Heritage Spaces

Note : start your questionnaire by an introduction like:

My name is **Aya Shukri Mohammed**, and I am a student in the Interior Design Engineering Department at Tishk International University. This questionnaire is part of my graduation thesis, which focuses on designing a new Kurdish Cultural Museum in Erbil.

The purpose of this questionnaire is to collect information about user needs, preferences, and expectations. Your input will directly influence the interior design decisions for the future museum project.

Your responses will be kept confidential and used only for academic purposes. Thank you for your valuable time and contribution.

4. Pilot Study

A small-scale version of your questionnaire before the main research, like practicing before a performance.
Why is it essential?

- Tests if questions are clear and understandable
- Identifies confusing or missing questions
- Checks questionnaire length and completion time
- Reveals technical issues

4. Pilot Study

How to do it:
Sample size: 5-10 people who represent your target audience
Key questions to ask pilot participants:

- Were any questions unclear?
- What was confusing?
- What's missing?

Note: Pilot study data is never included in your final analysis; it's purely for testing and improvement.

5. Target Population and Sampling

Population

✓ Is the **large group** of people (or things) that your research is about.

Example: If you want to study how students feel about classroom design, your **target population is all students in the university.**

Sampling

Because you cannot ask or study everyone in the target population (too many, too far, too costly), you choose a **smaller group** from that population. This smaller group is called the **sample**.

Example: Instead of all students, you may only ask **100 students from different departments**.

Target population = everyone you are interested in
Sample = the smaller group you actually study

6. Methodology Chapter Structure and Evaluation

3.1 Chapter Introduction (5%)

3.2 Research Methodology Selection (20%) (Qualitative, Quantitative, or Mixed Methodology)

Description of the methodology and what type of sources you used

3.2.1 Qualitative Methodology

3.2.2 Quantitative Methodology

3.3 Data Collection (20%)

3.3.1 Secondary Data

3.3.2 Primary data (questionnaire),

3.3.3 Questionnaire (30%)

Theory to questions, question types, structure

3.4 Pilot Study (10%)

Purpose, design, results, and modifications

3.5 Target Population and Sampling (10%)

Target population, sampling method, and sample size justification

3.6 Chapter Summary (5%)

Do you have any Questions?