



# CHAPTER FOUR CASE STUDY AND RESULTS

Assistant Lecturer Aya Shukri Mohammed  
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# Outline

- **Objectives**
- **Outcomes**
- **Introduction to the Case Study**
- **Effective Tips to Choose the Right Case Study for Research**
- **Case study analysis**
- **Results**
- **Homework**



# Objectives

- ✓ To analyze selected case studies related to the research topic.
- ✓ To identify design strategies, standards, and user needs from real examples.
- ✓ To evaluate how the case studies respond to functional, aesthetic, and cultural aspects.
- ✓ To use questionnaire and case study results to understand user perspectives and expectations.



# Outcomes

- ✓ Clear understanding of strengths and weaknesses in existing projects.
- ✓ Identified design principles that can inform the proposed project.
- ✓ User needs and preferences summarized from the questionnaire.
- ✓ Practical recommendations that connect theory with design solutions.



# 1. Introduction

## What is a Case study?

A case study is a process of researching into a project and documenting through writings, sketches, diagrams, and photos. To understand the various aspects of designing and constructing a building, one must consider learning from other people's mistakes.

As Albert Einstein quoted,

*“Learn from yesterday, live for today, and hope for tomorrow. The important thing is not to stop questioning.”*



# 1. Introduction

## What is a Case study?

- ✓ A case study can be a **starting point for any project.**
- ✓ The main purpose is to research and understand the concepts that a designer has used while designing that project and how it worked, and our aim should be to learn from its perfections as well as from its mistakes, while adding our creativity.

**Note: Try to gather information on all famous projects because it is essential for a successful case study and is easily available too.**

## 2. Effective Tips to Choose the Right Case Study for Research



1. Select a case that aligns with your topic of research (which kind of building you're designing).
2. Once you've found your case study, you need to start by doing a literature or desktop study, which in simple terms means, **Google it**. Look at various websites to get a full idea of the project.
3. Usually, websites like **Arch Daily and Dezeen** will have a lot of these projects outlined as fact-filled pages.
4. Check the case study, is all information available or not?
  - **Site Plan**
  - **Floor Plans**
  - **Sections**
  - **Interior details**



## 3. Case Study Analysis

### 4.2.1 International Case Study (Name of the project)

#### 4.1.2 Site Plan Analysis

#### 4.1.3 Concept

#### 4.1.4 Circulation- Horizontal and Vertical

#### 4.1.5 Floor Plan Analysis & Zoning

#### 4.1.6 Interior analysis

##### 4.1.6.1 Materials & Color

##### 4.1.6.2 Lighting

##### 4.1.6.3 Interior Details

#### 4.2.6.4 Sustainability

#### 4.2.6.5 Building Services or Systems

#### 4.1.7 Structure

#### 4.1.8 Advantages and Disadvantages of the Project

**ANALYSIS NOT COPY AND PASTE!!**



# 3. Case study Analysis Example

4.1 International Case Study (Name of the project)

Case study description (2-4) sentences

**Architect:**

**Address:**

**Year built:**

**Client:**

**Area:**

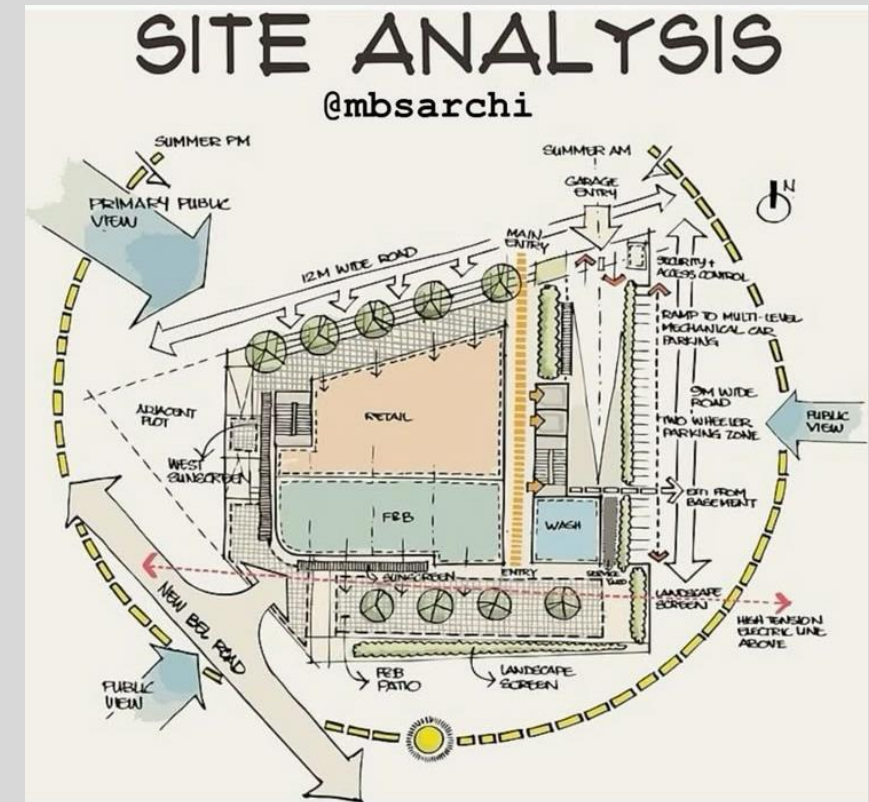
**\*Write the general information with a figure**

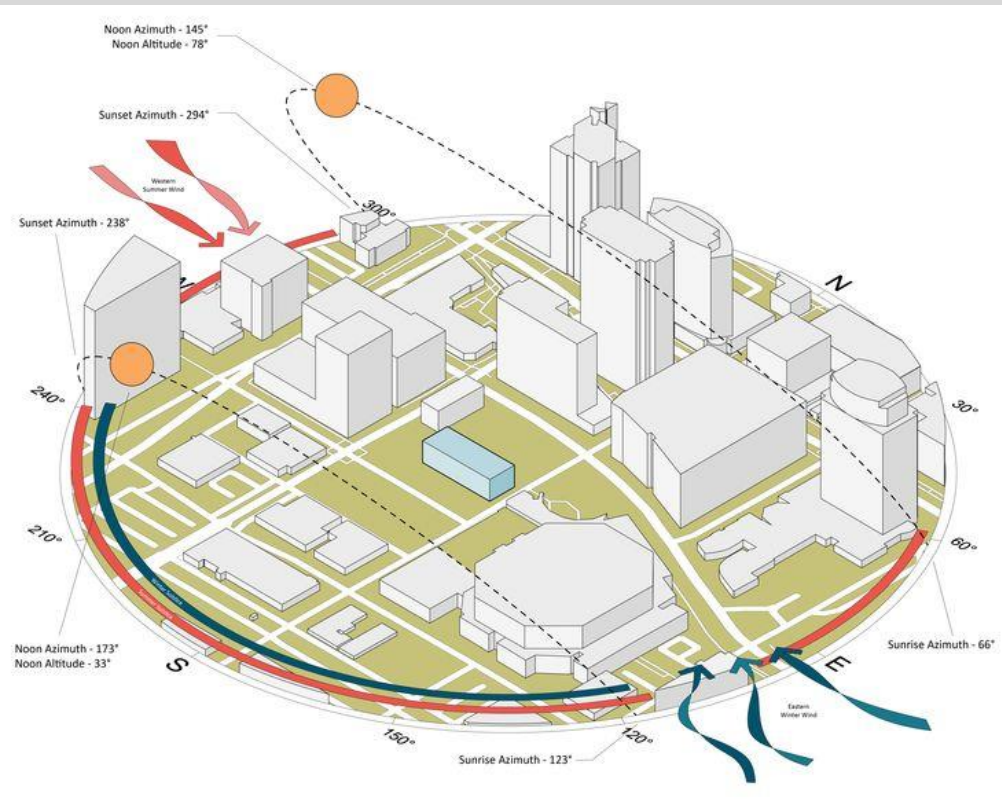
# 3. Case study Analysis Example

## 4.1.1 Site plan analysis

In this section, try to cover these topics:

- The location of the project with the site plan
- Main roads
- Size of the site.
- Site and building ratio.
- The orientation of the building.
- Entry and exit locations into the site as well as into the building.
- Sun direction
- Wind Direction
- Noise





Experience the power of efficient design and bring your architectural visions to life.

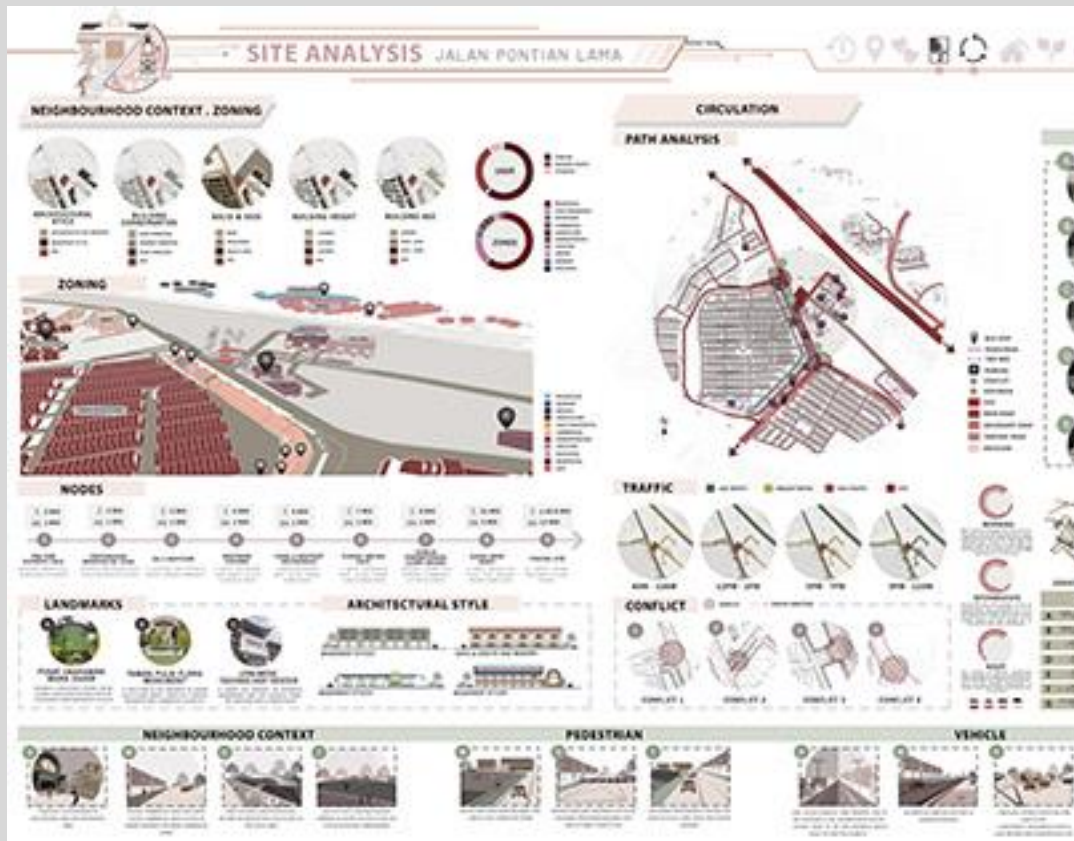
# SITE ANALYSIS ANALYSIS IN ARCHICAD

MSBIM 2024.

## ArchiCAD Site Analysis (Easy Method)



**Note: Ensure that all thesis diagrams follow a consistent and specific style**



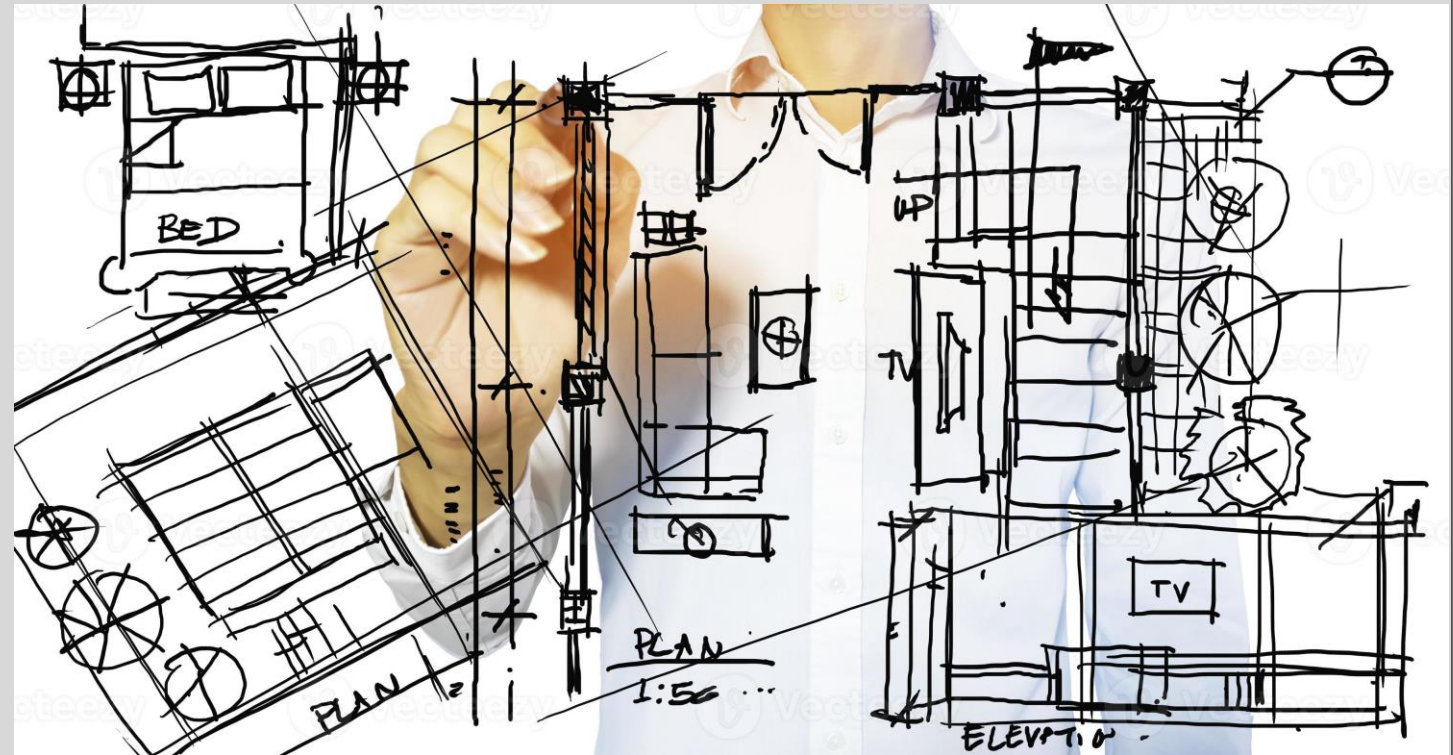
**Note: Ensure that all thesis diagrams follow a consistent and specific style**

# 3. Case study Analysis Example

## 4.1.2 ( Project name)

### Concept

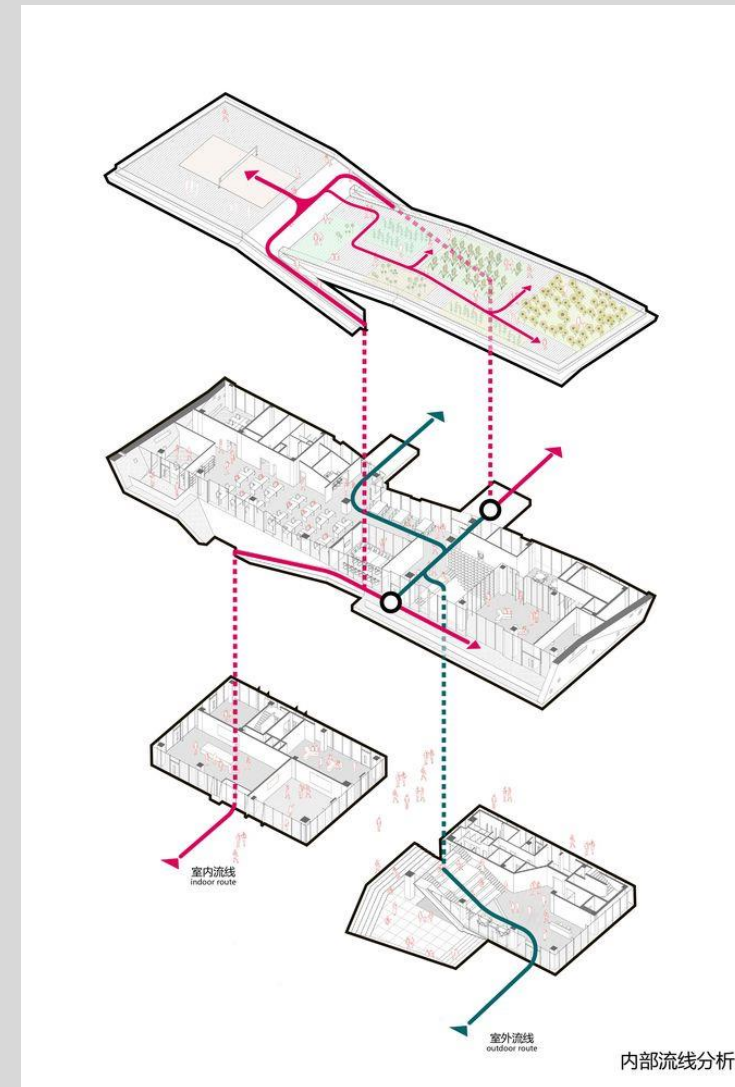
- ✓ Analyzing the reason behind the form of that particular building and interior elements...and how it merges with the surrounding environment.
- ✓ Analyze the philosophy of the design with sketches or figures



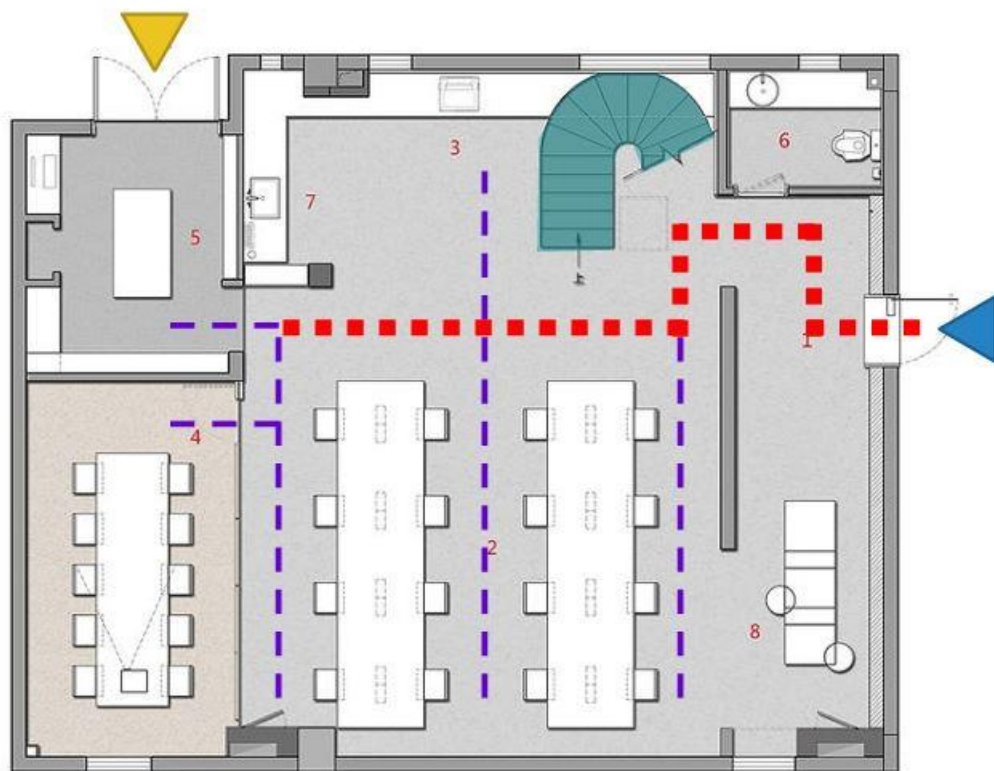
# 3. Case study Analysis Example

## 4.1.3 Circulation- Horizontal and Vertical

- ✓ Horizontal circulation consists of elements such as the **corridors and lobbies**.
- ✓ Vertical circulation includes **elevators, staircases, ramps**, etc.
- ✓ The efficiency of the placement of these services should be analyzed.
- ✓ Size and area of corridor and lobbies.
- ✓ Placement of staircases, ramps, elevators, etc.



▼ 一层平面图



- |             |     |                     |     |                 |     |             |     |
|-------------|-----|---------------------|-----|-----------------|-----|-------------|-----|
| 1 ENTRANCE  | 入口  | 3 PRINTING DISTRICT | 文印区 | 5 MATERIAL ROOM | 材料室 | 7 TEA AREA  | 茶水区 |
| 2 WORKSPACE | 办公区 | 4 MEETING ROOM      | 会议室 | 6 TOILET        | 洗手间 | 8 REST AREA | 休息区 |



Main Entrance

Service Entrance



Primary Circulation

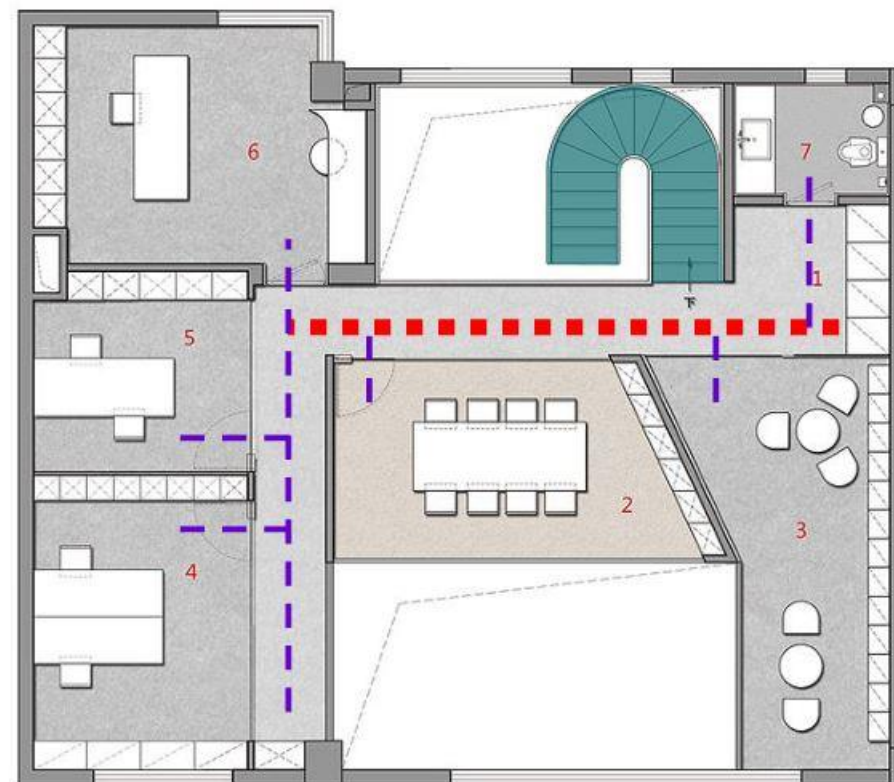


Secondary Circulation



Staircase

▼ 二层平面图



- |                |     |                      |       |                      |       |          |     |
|----------------|-----|----------------------|-------|----------------------|-------|----------|-----|
| 1 STORAGE AREA | 储物区 | 3 REST AREA          | 休息区   | 5 INDEPENDENT OFFICE | 独立办公室 | 7 TOILET | 洗手间 |
| 2 MEETING ROOM | 会议室 | 4 INDEPENDENT OFFICE | 独立办公室 | 6 INDEPENDENT OFFICE | 独立办公室 |          |     |

# 3. Case Study Analysis

## 4.1.4 Floor Plan Analysis & Zoning (Example)

The main purpose of the Trent student centre is to reduce overcrowding in Bata Library and create a social centre for students (ArchDaily 2018). The building has educational, recreational, cultural and healthcare facilities. However, there are more educational and cultural facilities than other types of facilities. The shape of the building coincides with the library and uses the same materials.

The building has three levels, as shown in Figure 3.6, that offer wonderful views of the river on one side and of the campus on the other side. The ground floor has educational and recreational facilities such as a lecture theatre, event space, classroom, café and forum. The ground floor offers four entrances to the building.

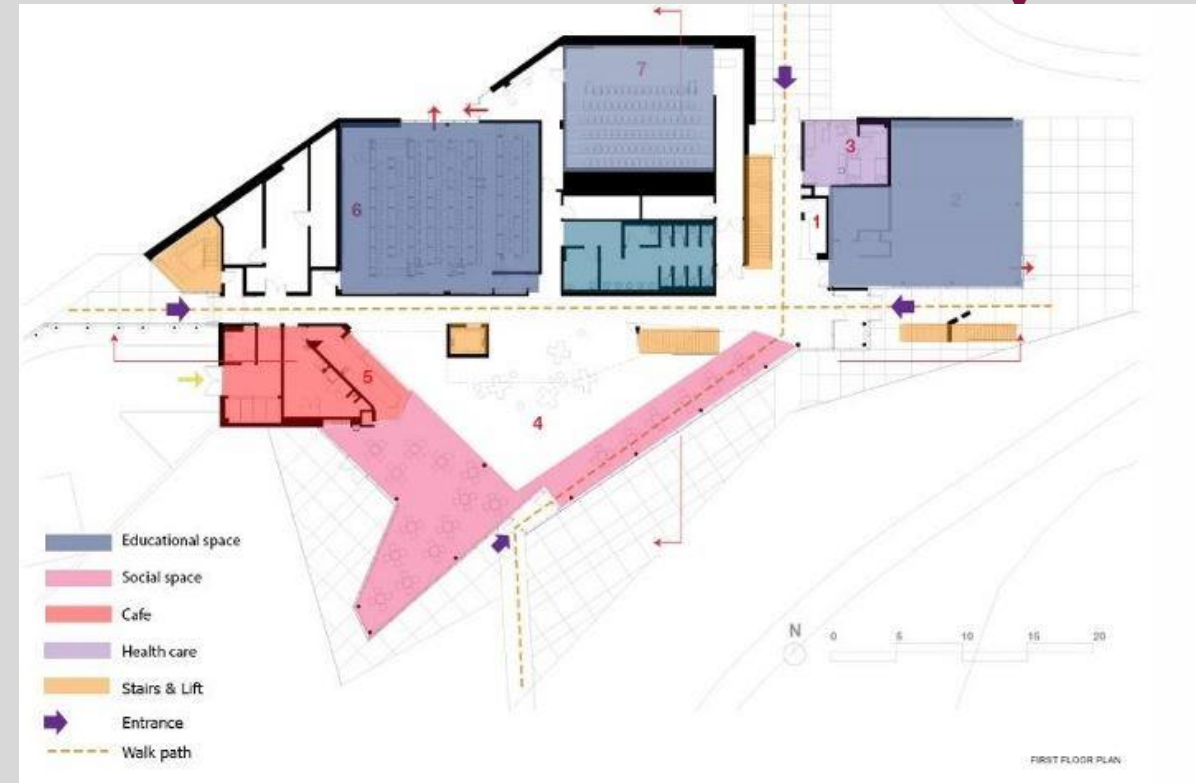


Figure 3.6 Existing Zoning of The Ground Floor of Trent University Student Centre (ArchDaily, 2018)

# 3. Case Study Analysis

## 4.1.4 Floor Plan Analysis & Zoning (Example)

The first floor, as shown in Figure 3.7, has a variety of educational spaces such as student association meeting rooms and offices, silent study classrooms and information study rooms. A special feature on this level is a tiered seating area near the forum space

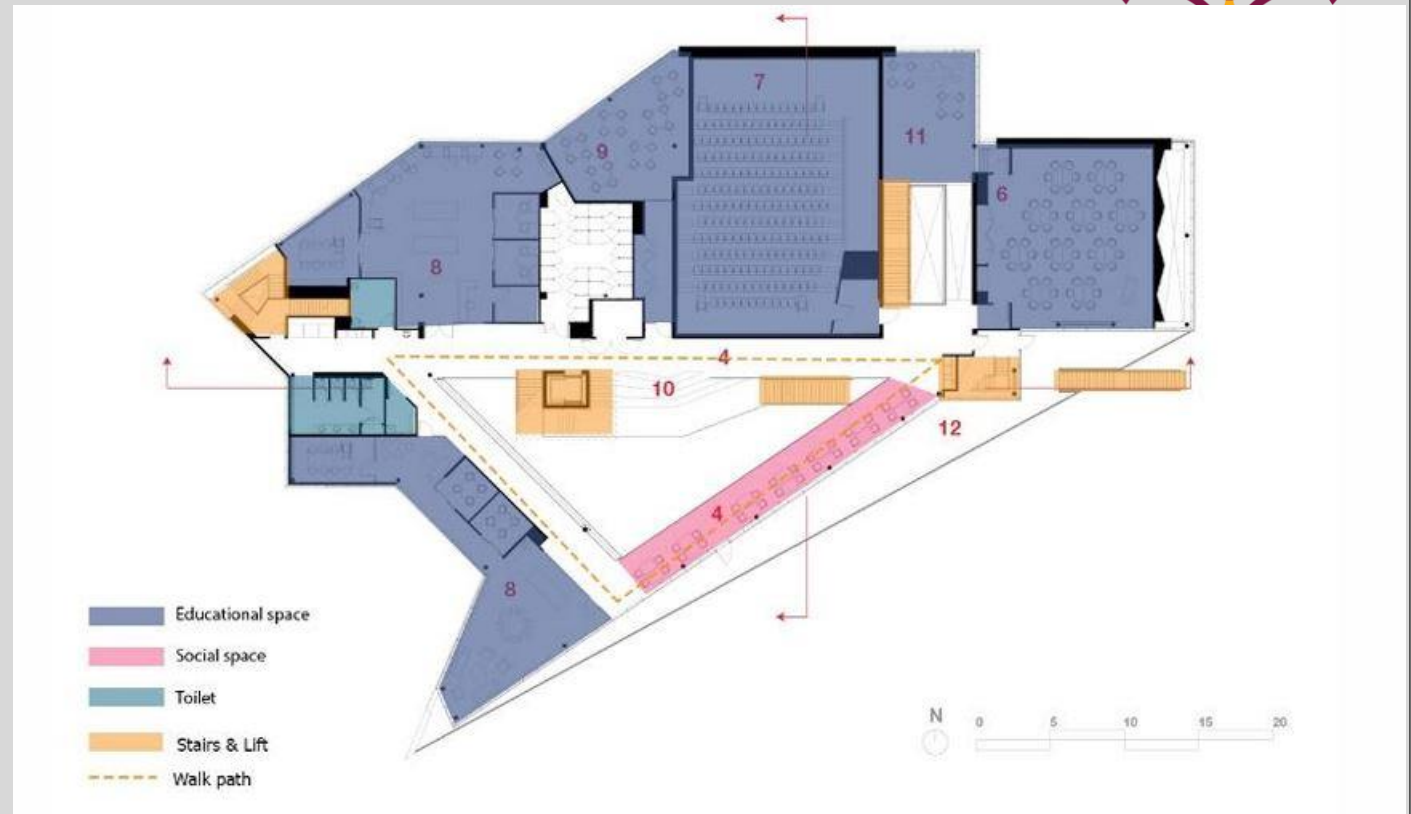
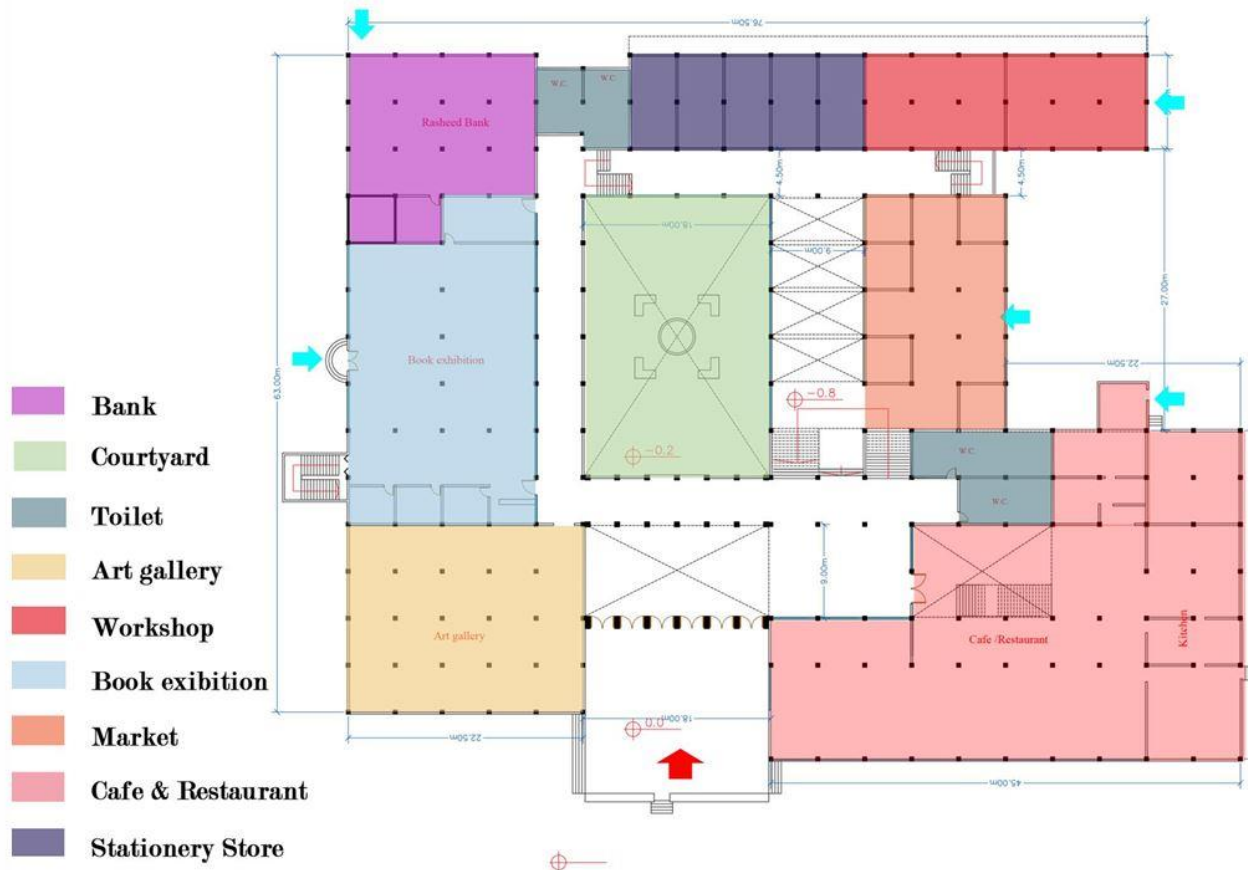


Figure 3.7 Existing Zoning of The First Floor of Trent University Student Centre (ArchDaily, 2018)

### 3. Case Study Analysis



#### 4.1.4 Floor Plan Analysis & Zoning (Example)



**You have to work like this 😊**

# 3. Case Study Analysis



## 4.1.4 Floor Plan Analysis & Zoning

After completing the analysis of zoning, floor plans, and circulation, a **Table of Areas** must be prepared for each case study. The table should list all functional zones in the first column and present the corresponding measured areas in the second column. This process ensures clarity in understanding the spatial distribution and proportion of each zone.

### 3. Case Study Analysis



Table (4.1) International case study Table of area.

Zone	Area (m <sup>2</sup> )	% of Total Area
Entrance / Lobby	45	3.2%
Reception	30	2.1%
Waiting Area	60	4.2%
Administration Offices	120	8.4%
Classrooms / Studios	300	21.1%
Library	150	10.5%
Cafeteria	200	14.0%
<b>Circulation (Corridors)</b>	180	<b>12.6%</b>
Service Areas	90	6.3%
Outdoor Spaces	250	17.6%
<b>Total</b>	<b>1425</b>	<b>100%</b>



## **3. Case Study Analysis**

### **4.1.5 Interior analysis**

In this section, the interior details will be studied in an organized way. First, a short overview will be given, and then each item will be analyzed one by one to explain its purpose and role in the overall design.

#### **4.1.5.1 Materials & Color**

#### **4.1.5.2 Lighting**

#### **4.1.5.3 Interior Details**

#### **4.2.5.4 Sustainability**

#### **4.2.5.5 Culture and Context**

#### **4.2.5.6 Building Services or Systems**



## 3. Case Study Analysis

### 4.1.5.1 Materials & Color

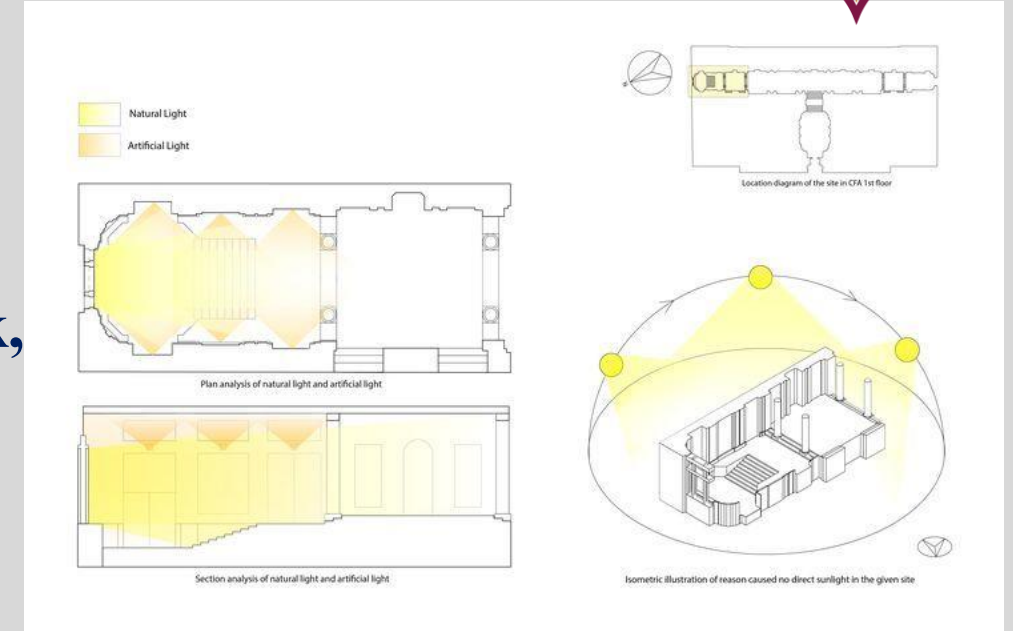
- ✓ Identify the main materials used (**wood, glass, metal, fabric, etc.**).
- ✓ Describe the color scheme and how it **affects the mood** of the space, the project, or how it reflects the concept.
- ✓ Discuss whether the materials are durable, suitable, and aesthetically pleasing.
- ✓ All the points should be supported by figures

# 3. Case Study Analysis

## 4.1.5.2 Lighting

- ✓ Look at **natural and artificial** lighting.
- ✓ Check how light is distributed (**general, task, accent**).
- ✓ Explain how lighting supports comfort, function, and atmosphere.

**Note:** Even if all the information is not available in the sources, students are expected to analyze the project independently





## 3. Case Study Analysis

### 4.1.5.3 Interior Details

- ✓ Analyze furniture, finishes, decorations, and fittings.
- ✓ Explain how these details contribute to comfort and design identity and how they reflect the project concept.
- ✓ Consider ergonomics and user-friendliness.

**Note: Even if all the information is not available in the sources, students are expected to analyze the project independently**

# 3. Case Study Analysis



## 4.1.5.4 Sustainability

- ✓ Check if eco-friendly or recycled materials are used.
- ✓ Look for energy-saving systems (LED lights, natural ventilation).
- ✓ Discuss how the design reduces environmental impact.

**Note: Even if all the information is not available in the sources, students are expected to analyze the project independently**



## 3. Case Study Analysis

### 4.1.5.5 Culture and Context

- ✓ Analyze how interior design elements reflect local culture and traditions.
- ✓ Consider how the design responds to the social and historical context.
- ✓ Explain whether the design strengthens identity and connects with users' cultural values.

**Note: Even if all the information is not available in the sources, students are expected to analyze the project independently**



## 3. Case Study Analysis

### 4.1.5.6 Building Services / Systems

- ✓ Identify systems like HVAC (heating, ventilation, air conditioning), plumbing, and electrical.
- ✓ Explain how these systems support user comfort and building performance.
- ✓ Comment on how well they are integrated into the design.

**Note: Even if all the information is not available in the sources, students are expected to analyze the project independently**



## 3. Case Study Analysis

### 4.1.6 Structure

- ✓ Study the structural system used (**columns, beams, walls, slabs**).
- ✓ Analyze how the **structure supports the interior** layout and design.
- ✓ Consider whether the structure is exposed as a design feature or hidden.
- ✓ Evaluate the relationship between structure, aesthetics, and functionality.

**Note: Even if all the information is not available in the sources, students are expected to analyze the project independently**

# 3. Case study

## 4.2.1 National Case Study Name

4.2.2 Location

4.2.3 Concept

4.2.4 Circulation- Horizontal and Vertical

4.2.5 Floor Plan Analysis & Zoning

4.2.6 Interior analysis

4.2.6.1 Materials & Color

4.2.6.2 Lighting

4.2.6.3 Interior Details

4.2.6.4 Sustainability

4.2.6.5 Culture

4.2.6.7 Building Services or Systems

4.2.7 Structure

4.2.8 Advantages and Disadvantages of the Project





## 4. Results

When writing the results, you must present the findings of your research clearly and without personal opinion (the interpretation comes later in the discussion chapter). The results should include both **the questionnaire analysis** and the **case study findings**

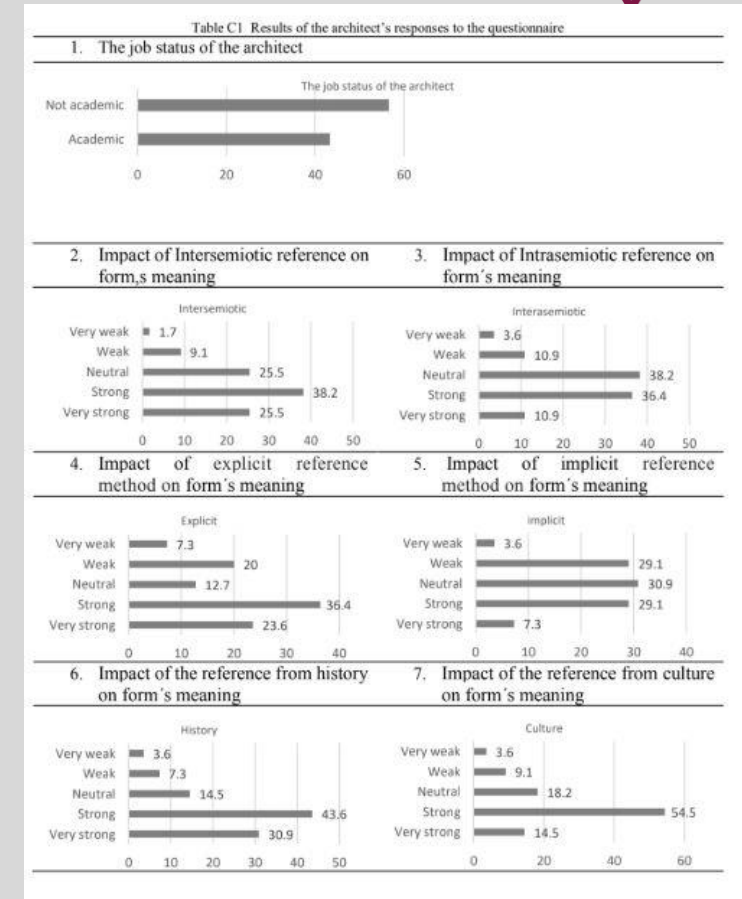
# 4.1 Results of the Questionnaire

In general, the **"results"** refer to the **findings or outcomes** of the research. This is where the researcher reports **what was discovered** after analyzing the data, conducting experiments, or studying the cases, without adding personal opinions or interpretations.

**Present the data clearly** using tables, charts, or graphs.

Show percentages, frequencies, or averages depending on your questions.

Write short descriptive statements to summarize each figure (e.g., “65% of respondents preferred natural lighting over artificial lighting”).



Questionnaire result form example

## 4.1 Results of the Case Studies



- ✓ Summarize your observations from the case studies in a systematic way.
- ✓ Use **comparison tables** to highlight similarities and differences.
- ✓ Keep descriptions short and factual (e.g., “*Case A uses modern materials, Case B uses traditional, Case C mixes both*”).
- ✓ Present drawings, sketches, and photos to support the findings.



## 4.1 Results of the Case Studies

- ✓ Create a **comparison table** between the three case studies. Each criterion discussed in the analysis (such as materials, lighting, sustainability, etc.) must be listed in the first column. In the following columns, summarize each case study using only **short expressions or keywords**

Questionnaire result form example



## 4. Results of the Case Studies

### Example

Comparison Criteria	Case Study 1	Case Study 2	Case Study 3
Criteria	Case Study 1 Museum A	Case Study 2 Museum B	Case Study 3 Museum C
Site Size	5,000 m <sup>2</sup>	3,200 m <sup>2</sup>	8,500 m <sup>2</sup>
Cultural Integration	High - Traditional motifs	Medium - Modern interpretation	Low - Contemporary approach
Visitor Capacity	500 visitors/day	300 visitors/day	1000 visitors/day



# Home work

## Case Study Chapter Structure and Evaluation

4.1 Chapter Introduction (5%)

4.2 Case Study Analysis ( an introduction paragraph about your 3 case studies in general) (5%)

4.2.1 International Case Study 1 (20%)

4.2.2 International Case Study 2 (20%)

4.2.2 Local Case Study (20%)

4.3 Results ( an introduction paragraph about your project results) (5%)

4.3.1 Questionnaire Results (10%)

4.3.2 Case studies Results (10%)

4.4 Chapter Summary (5%)



**Do you have any Questions?**