

Methodology of analyzing similar examples in the architectural design process

Prof. Dr. Faris Ali Mustafa
Department of architecture – SUE

Basic questions

**First
question**



What does it mean analyzing similar example? - Similarities

**Second
question**



Why analyze similar examples? - Objectives

**Third
question**



How to analyze?- Steps to the process of analysis

**Fourth
question**



What are the tools of analysis?

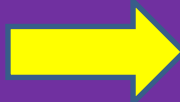
General concepts

Similar
example



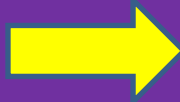
Function - Location (climate) – Design Thought

Analysis



Dismantling the thing to its original
components:
a statement and simplify the particulars
and details

Methodology



The method used - tools

The objectives of the analysis process – why analyze?

The first goal



To obtain information that could benefit the new design

The second goal



To identify existing problems (evaluation after occupancy)

The third goal



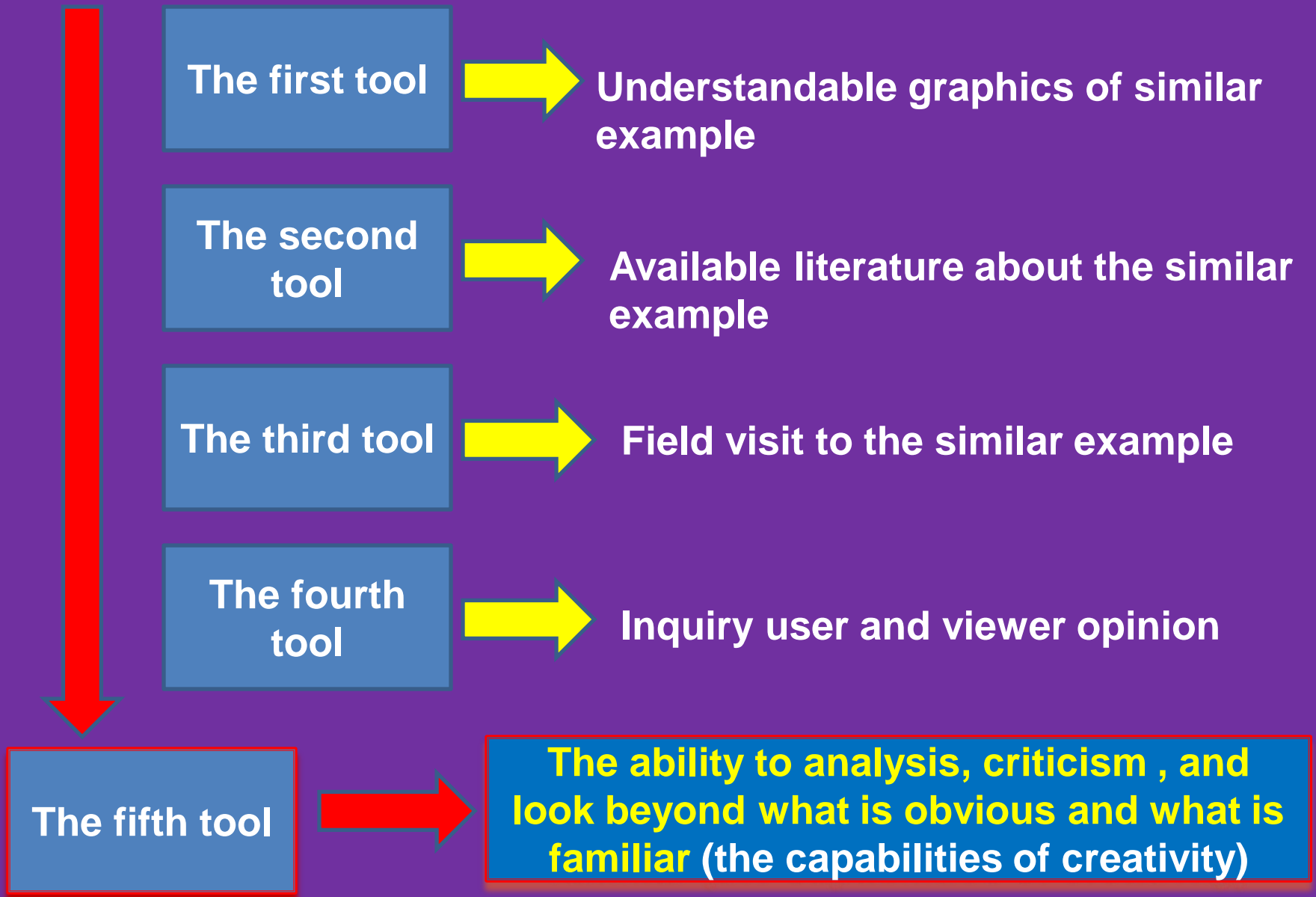
To study the design principles of building typology

The fourth goal



To develop the knowledge and intellectual stock feed for the designer (Designing a model through systems based on prior knowledge)

Tools of analysis



Levels of analysis

The first level



Level of detailing

The second level



The item level (window – space...etc)

The third level



Building levels (floors – masses)

Analysis process steps - how to analyze?

First:
Function

Plans analysis

Functional Program :

- Areas and sizes
- Elements and spaces
- The proportion of elements and spaces in the building

Functional performance:

- Functional relationships between Elements and spaces - entrances and egresses
- Elements of the movement - services
- Performance of each space
- Lighting, ventilation and view and other


Site
analysis

- The entrances and egresses
- The relationship with the surrounding roads and urban fabric
- Relationship with outside facilities

Elements of analysis process


Second: Construction

Analysis of construction materials



- Identifying the used materials
- How to use the materials structurally and architecturally
- New construction materials

Analysing the method of construction



- Studying the construction method / methods used in the building
- How to use the method & its relation with Architectural relationship thought
- To identify the new in the architectural, structural thought

Elements of analysis process

Third: forming

Analysing the elements of forming



- Identifying the lines and surfaces and masses
- and how to apply them in the building

Analysing the means of forming



- Studying and forming methods used in the building such as color, lighting, sculpture and decoration...etc
- The feasibility of what has been achieved in the building

Analysis of the blocks (feature)



- Identifying the building type (explicit-composite)
- Its impact on the design and fine values inherent in the mass

Elements of analysis process

**Fourth:
Design thought**

First aspect



Identifying the design approach

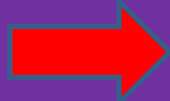
Second aspect:



**Designer architectural thought-
theories of architecture**

Output of the analysis process

Writing



Fundamentals statement - explain and detail (language)

Tables



Areas, sizes of spaces - functional relationships

Diagrams



Ratios of spaces and components - functional relationships

Sketches & photos



Photo graphics - simplified explanatory graphics

First example

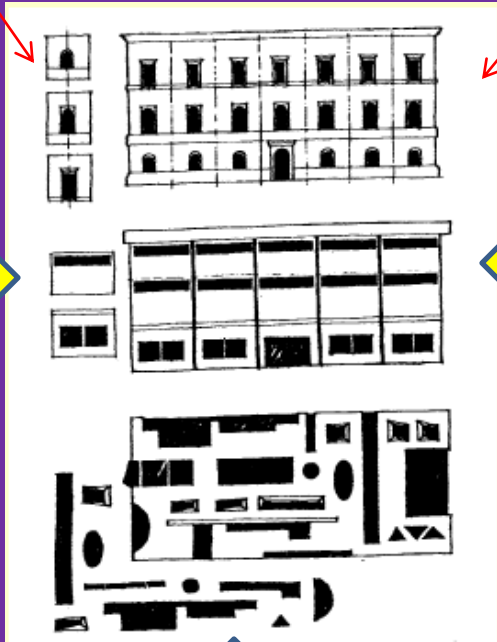
Analysis of window

Window's shape
Circular-square-
rectangle...etc

Window's working
Slider - axial - articular

...etc

Color
Red-white-
green-blue-
black-
yellow...etc



Material
Wood-steel -
aluminum-
glass...etc

Window's function
View-lighting-
ventilation...etc

Second example

Space analysis

space shape

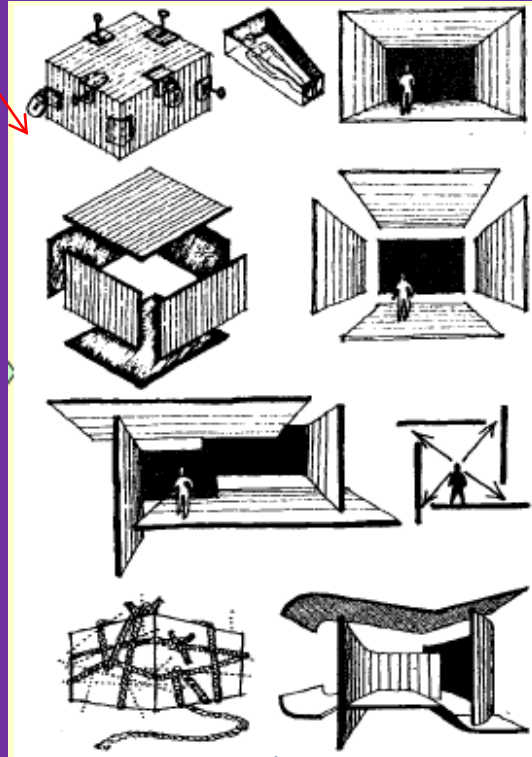
Circular-
square-
rectangle...etc

Space location and
its relationship to the
rest of spaces

...etc

Function
Dimensions
Furniture

Material
Construction
method

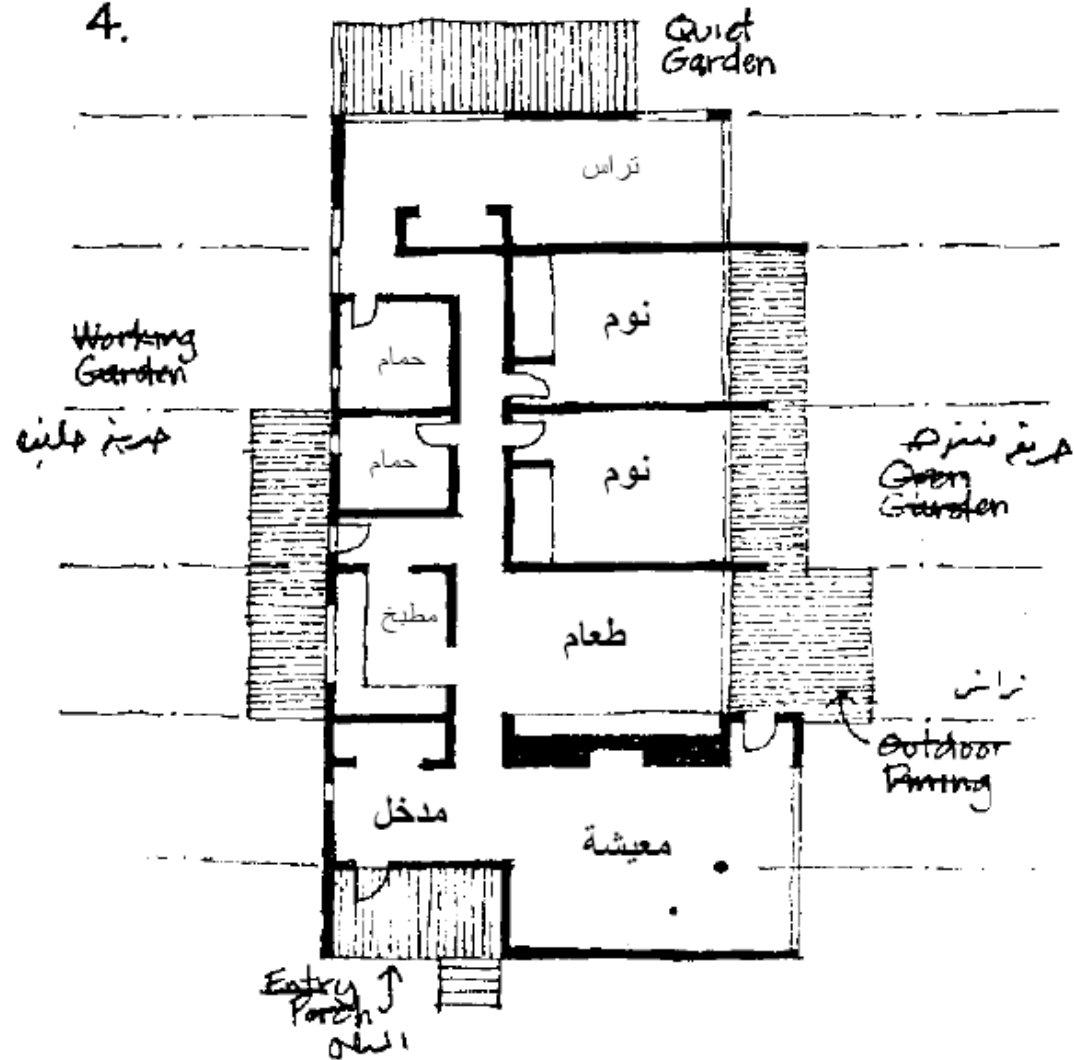


Space efficiency
View-lighting-
ventilation

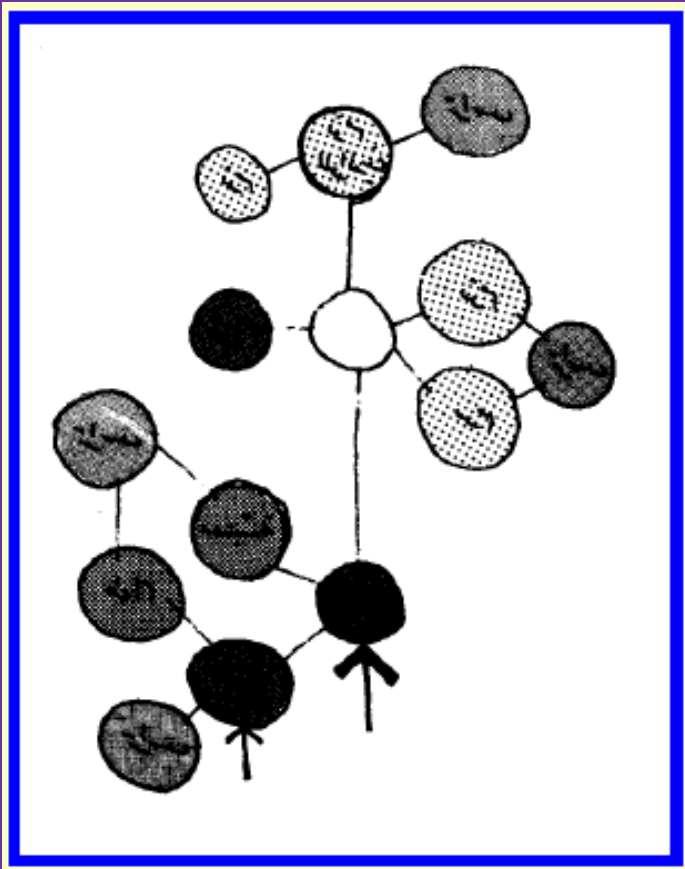
Third example

Plan analysis

4.



المسقط الأفقي للمسكن



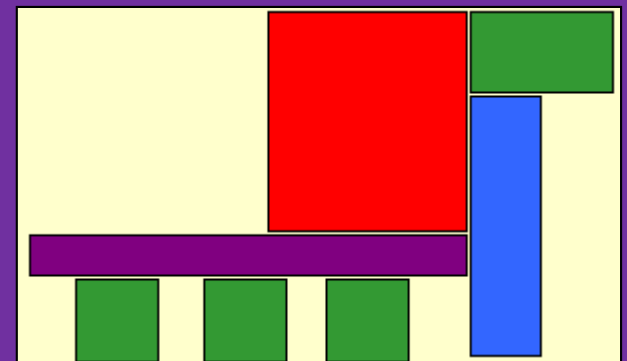
| Space | Area | Height | ----- |
|-------------|------|--------|-------|
| Living room | 6*4 | 3 | |
| Dining room | | | |
| Bedroom | | | |
| ----- | | | |
| ----- | | | |

Analysis of areas

Functional relationships diagram

Functional efficiency for each space

- Furniture & space volume: **good-medium-bad**
- Circulation inside space: **good-medium-bad**
- Lighting & ventilation: **good-medium-bad**
-etc



Spaces ratio – design rates

Fourth example

Visual analysis of buildings

