Methodology of analyzing similar examples in the architectural design process

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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?

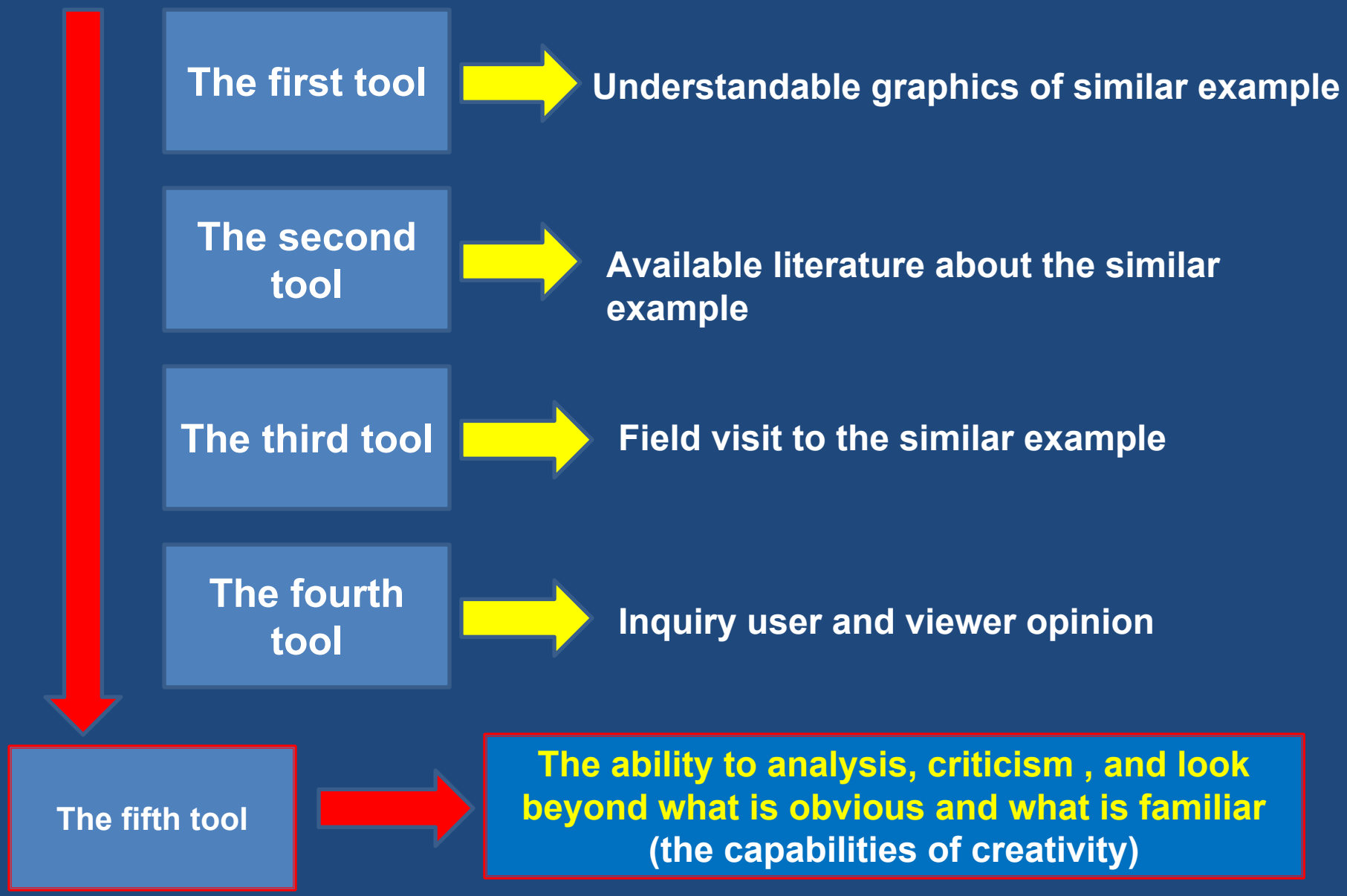
General concepts

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

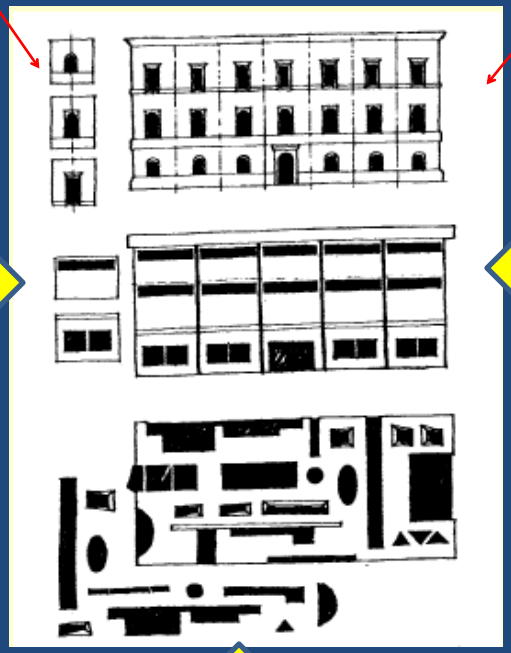
Circular-square-rectangle…etc

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

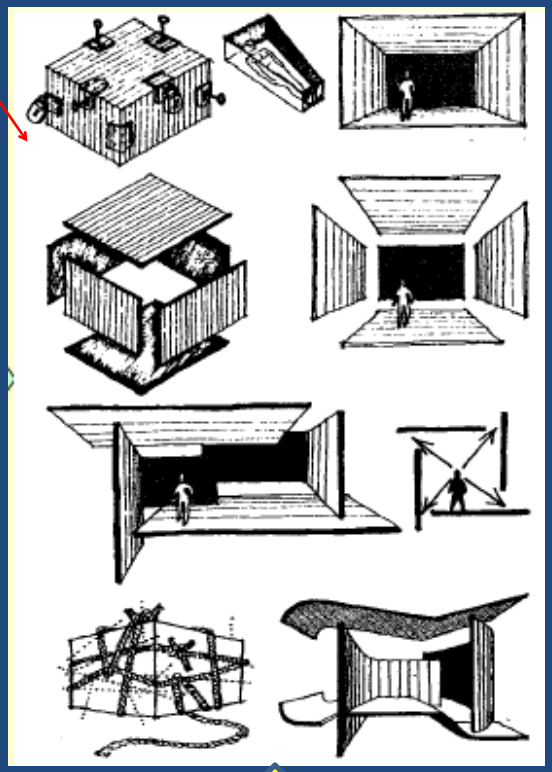
space shape

Circular-square -rectangle…etc

Space location and its relationship to the rest of spaces

…etc

Function
Dimensions
Furniture



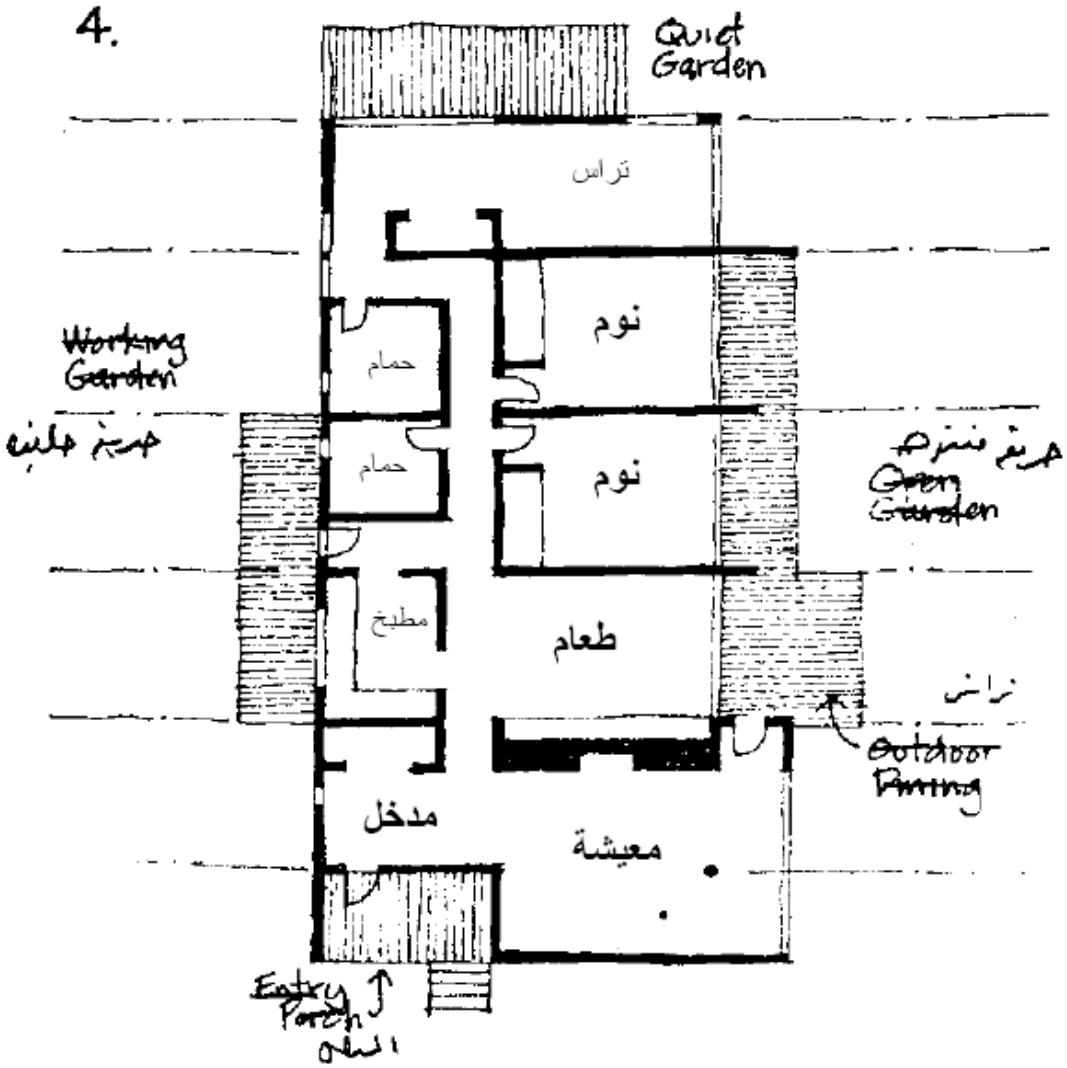
Material

Construction method

Space efficiency
View-lighting-ventilation

Third example

Plan analysis



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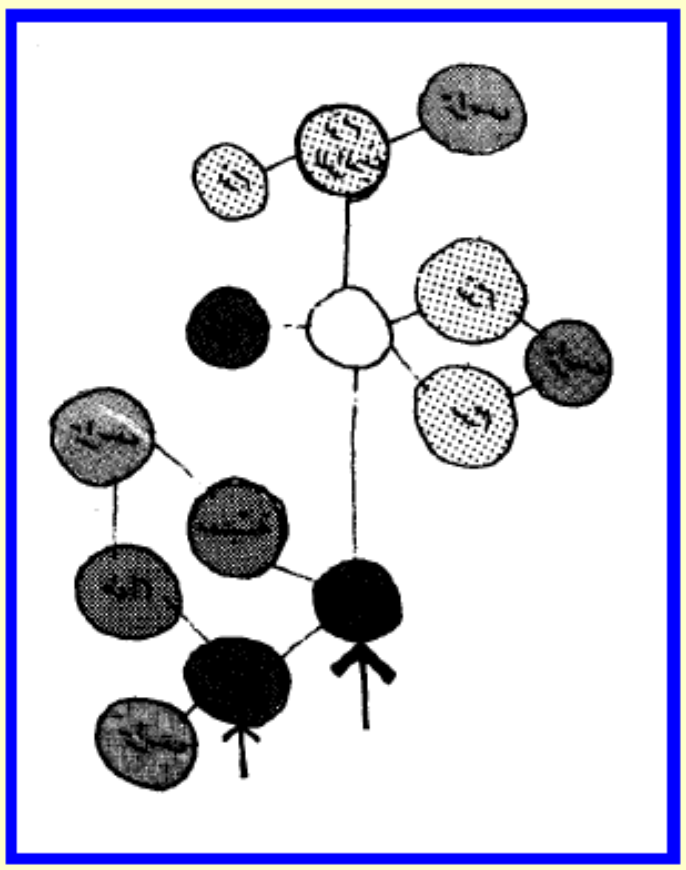
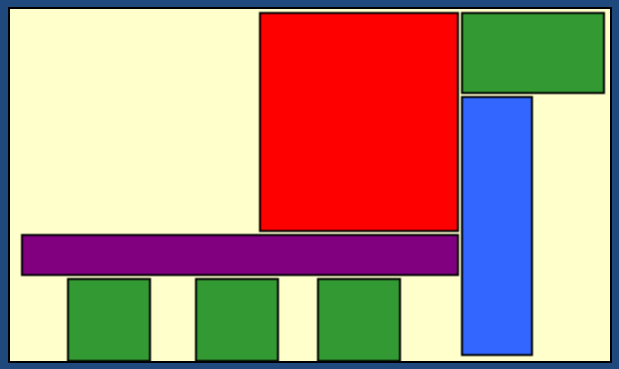


Functional relationships diagram

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

Analysis of areas



Spaces ratio – design rates

Functional efficiency for each space

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