College of Engineering
Department of Interior Design

Design Methodology
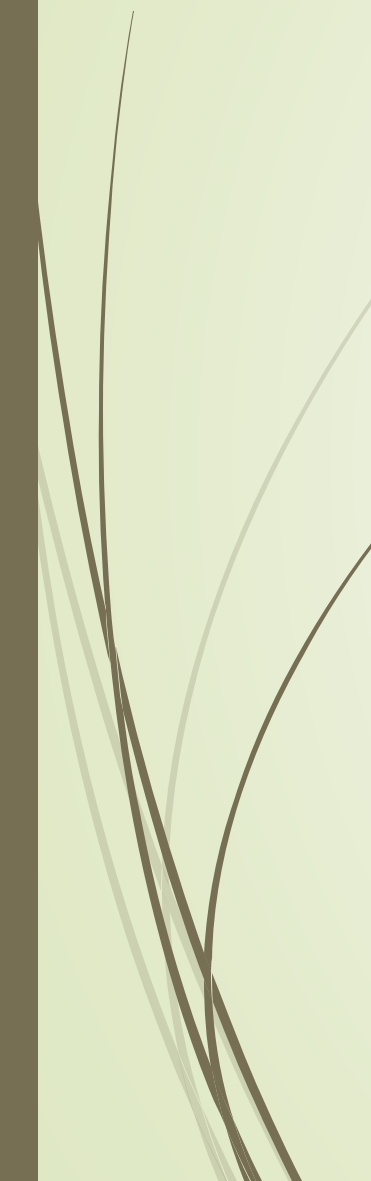
4th year – 1nd Semester

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Room No. 313

Academic Year 2018-2019

	Course Name	History of Interior Design
	Course Code	INDS 315
	Lecturer in Charge	Asst. Lecturer
	Department/College	Interior Design / Engineering
	Contact information	e-mail: madyan.maher@gmail.com madyan.maher@ishik.edu.iq
	Time(in hours) per week	Theory: 3 h.
	Keywords	Problems, solutions and the design process.
	Objectives: At the end of this lecture, the students should be able to: Establish basic concepts about **Problems, solutions and the design process**	

Week	Lecture Date	Number of hours	Topic
1	2/10/2018	3 h	Introduction, course overview
2	9/10/2018	3h	Design as process
3	16/10/2018	3h	Route maps of the design process
4	23/10/2018	3h	The multi-dimensional design problem
5	**30/10/2018**	**3h**	**Problems, solutions and the design process**
6			Thinking
7			Imagination
8			Creative thinking
9			Creative thinking
10			Design tactics
11			**Design tactics**
12			
13			

Previous lecture

- The generators of design problems

- The domain of design constraints

- The function of design constraints

Problems, solutions
and the design process

Course Reading List and References:

How Designers Think
by Bryan Lawson

Problems, solutions and the design process

- The designer has a prescriptive rather than descriptive job.
- Unlike scientists who describe how the world is, designers suggest how it might be. Designers are therefore all 'futurologists' to some extent.

FOUR LEVELS OF ANALYTICS FOR ASSET INVESTMENT PLANNERS

Descriptive
What has happened?

Diagnostic
Why did it happen?

Predictive
What will happen next?

Prescriptive
What should I do?

Looking back | Looking forward

Problems, solutions and the design process

- The very essence of their job is to create the future, or at least some features of it.

Problems, solutions and the design process

- The advanced technocratic society for which the contemporary designer works is itself changing rapidly.

- Unlike previous generations we live in a world with comparatively little tradition and cultural stability.

- Dickson (1974) sees technology as the major determinant of the structure of society, and argued that the negative societal effects of high technology suggest we should seek alternative, less harmful forms of technology.

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Problems, solutions and the design process

- All of this makes life even more difficult for the designer who now has not just got uncertainties about the design but is even unsure of the nature of the world into which it must fit.

- So how can designers respond to an uncertain future?

- There are three main ways of dealing with this in the design process, which we might call procrastination, non-committal design and throw-away design.

Procrastination

- The first approach, procrastination, is based on the idea that somehow the future may become more certain if only we wait a little.
- This strategy is popular with very long time-scale decision-makers such as politicians and town planners.

Non-committal design

- The second design response to uncertainty is to be as noncommittal as possible whilst still actually proceeding.

- Thus architects have tended to design **bland, anonymous and neutral buildings** which are non-specific either in terms of their functions or locations.

- The notion of flexible and **adaptable environments** was popular for a while in schools of architecture.

- Habraken and his followers were highly influential and went so far as to suggest that **architects should design support structures which would provide only shelter, support and services,** leaving future users free to create their own homes and express their own identity by arranging the kits of parts that fit within these 'supports' (Habraken 1972).

Throw-away design

- The third response to uncertainty is to design for the **present only**.

- Thus obsolescence is built in and the designed object is intended to be **thrown away and replaced with a more up-to-date design**.

- This strategy has been increasingly adopted by the designers of mass-produced goods. Everything from clothes to motor cars may be discarded in favour of new styles and images.

Design solutions creating design problems

- Designing in times of rapid change is clearly more difficult than designing for a stable and predictable world.

- So it turns out to be the case that many of our contemporary design problems are themselves substantially the results of previous design activity.

- It is worth pausing briefly here to summarise some of the **important characteristics of design problems and solutions**, and the lessons that can be learnt about the nature of the design process itself.

Design problems

■ *1) Design problems cannot be comprehensively stated.*

■ It is clear that many components of design problems cannot be expected to emerge until some attempt has been made at generating solutions.

■ Indeed, many features of design problems may never be fully uncovered and made explicit.

Design problems

- *2) Design problems require subjective interpretation*

- In fact not only are designers likely to devise different solutions but they also perceive problems differently.

- Our understanding of design problems and the information needed to solve them depends to a certain extent upon our ideas for solving them.

- In this sense design problems, like their solutions, remain a matter of subjective perception.

Design solutions

- *1) There are an inexhaustible number of different solutions*

- Since design problems cannot be comprehensively stated it follows that there can never be an exhaustive list of all the possible solutions to such problems.

- Some of the engineering-based writers on design methodology talk of mapping out the range of possible solutions.

Design solutions

- *2) There are no optimal solutions to design problems*

- Design almost invariably involves compromise. Sometimes stated objectives may be in direct conflict with each other, as **when motorists demand both good acceleration and low petrol consumption.**

- Rarely can the designer simply optimize one requirement without suffering some losses elsewhere.

Design solutions

- *2) There are no optimal solutions to design problems*

- There are thus no optimal solutions to design problems but rather a **whole range of acceptable solutions** (if only the designers can think of them) each likely to prove more or less satisfactory in different ways and to different clients or users.

- Design solutions can never be perfect and are often more easily criticised than created, and designers must accept that they will almost invariably appear wrong in some ways to some people.

Design solutions

- *3) Design solutions are often holistic responses*

- The bits of design solutions rarely map exactly on to the identified parts of the problem.

- Rather one idea in the solution is more often an integrated and holistic response to a number of problems.

- Thus it is rarely possible to dissect a design solution and map it on to the problem saying which piece of solution solves which piece of problem.

Design solutions

- *4) Design solutions are a contribution to knowledge*

- Once an idea has been formed and a design completed the world has in some way changed.

- Each design, whether built or made, or even if just left on the drawing-board, represents progress in some way.

- Design solutions are themselves extensively studied by other designers and commented upon by critics.

- Thus the completion of a design solution does not just serve the client, but enables the designer to develop his or her own ideas in a public and examinable way.

Design solutions

- *5) Design solutions are parts of other design problems*

- Design solutions are not panaceas and most usually have some undesirable effects as well as the intended good effects.

- This is a very dramatic illustration of the basic principle that everything we design has the potential not only to solve problems but also to create new ones!

The design process

- *1) The process is endless*

- Since design problems defy comprehensive description and offer an inexhaustible number of solutions the design process cannot have a finite and identifiable end.

- The designer's job is never really done and it is probably always possible to do better.

- Designing is quite unlike puzzling.

- **Time, money and information** are often major limiting factors in design and a shortage of any of these essential resources can result in what the designer may feel to be a frustratingly early end to the design process.

The design process

- *2) The process involves finding as well as solving problems*

- It is clear from our analysis of the nature of design problems that the designer must inevitably expend considerable energy in identifying problems.

- Since neither finding problems nor producing solutions can be seen as predominantly logical activities, we must expect the design process to demand the highest levels of creative thinking.

The design process

- *3) Design inevitably involves subjective value judgement*

- Questions about which are the most important problems, and which solutions most successfully resolve those problems are often value laden.

- However, this concern cannot be resolved simply by denying the subjective nature of much judgement in design.

- Perhaps current thinking tends more towards making the designer's decisions and value judgements more explicit and allowing others to participate in the process, but this path too is fraught with many difficulties.

The design process

- *4) Designers work in the context of a need for action*

- Design is not an end in itself. The whole point of the design process is that it will result in some action to change the environment in some way, whether by the formulation of policies or the construction of buildings.

- Decisions cannot be avoided or even delayed without the likelihood of unfortunate consequences.

- **Unlike the artist, the designer is not free to concentrate exclusively on those issues which seem most interesting.**

- Clearly one of the central skills in design is the ability rapidly to become fascinated by problems previously unheard of.

Next Lecture

- DESIGN THINKING
- Types and styles of thinking
- Creative thinking
- Guiding principles
- Design strategies
- Design tactics
- Design traps

QUIZ TIME!

Group "A"

- Bryan Lawson, proposed his own design process map, Talk about this model with examples and sketches.

Group "B"

- What are the main function of design constraints ? Mention at least one example for each function.

THANK YOU FOR YOUR ATTENTION