College of Engineering
Department of Interior Design

Design Methodology

4th year – 1st Semester

M.S.C. Madyan Rashan

Room No. 313

Academic Year 2018-2019

	Course Name	History of Interior Design
	Course Code	INDS 523
	Lecturer in Charge	Asst. Lecturer
	Department/College	Interior Design / Engineering
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	Time(in hours) per week	Theory: 2 h.
	Keywords	Creative thinking
	Objectives: At the end of this lecture, the students should be able to: Establish basic concepts about **creative thinking.**	

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	6/11/2018	3h	Thinking
7	27/11/2018	3h	Imagination
8	**4/12/2018**	**3h**	**Creative thinking**
9			Creative thinking
10			Design tactics
11			Design tactics
12			
13			

- **Previous lecture**
- Imagination
- Architectural imagination
- The imagination is bridging the gap between perception and understanding.

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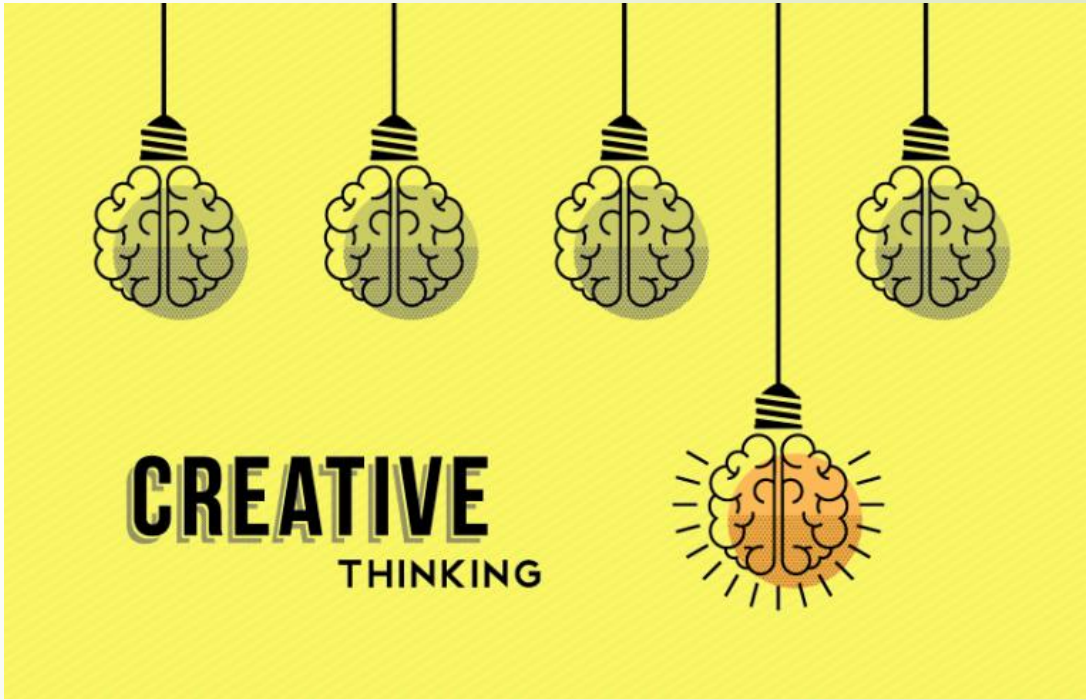
Creative thinking

Course Reading List and References:

- How Designers Think

  by Bryan Lawson

- Most people would describe design as one of the most creative of human pursuits.
- The so-called creative arts include musical composition, painting, sculpture and the various forms of two- and three-dimensional design.
- However, creativity and creative thought can be applied just as much in science, medicine, philosophy, the law, management and many other fields of human endeavor .



- Margaret Boden (1990) has proposed that it is useful to distinguish between what she calls **H-creativity** and **P-creativity**.
- H-creativity is that which results in **novel and fundamentally new ideas in the history of the world**. Thus Einstein's discovery of relativity or the moment when Archimedes leapt from his bath shouting 'Eureka!', are both moments of H-creativity.
- P-creativity, whilst less glamorous is none the less important to us here.
- For Margaret Boden rightly points out that an idea which is fundamentally novel to the individual mind is still of great significance, even though it may not necessarily be new to the world.
- Actually, in design there are often many developments of great significance for which it is quite hard to be sure just who had the **H-creative** idea and when.

- The mathematician Henri Poincaré (1924) reflected on his own considerable creative achievements in mathematical thought and has left us with some insights about the **processes** involved.
- Typically he describes a process divided into phases of quite different kinds of thought.
- **First** a period of initial investigation of the problem in hand, followed by a more relaxed period of apparent mental rest.
- **Next**, an idea for the solution appears almost unbidden by the thinker probably at the most unexpected time and in the most unlikely place.

- **Finally** the solution needs elaboration, verification and development.
- This '**eureka**' moment, as it is often called, seems quite characteristic of great creative moments.
- We have all heard how Archimedes is supposed to have leapt out of his bath crying 'Eureka' having solved a problem he had been working on for some time.
- It is not just scientists and mathematicians who report the sudden unexpected emergence of ideas.
- Painters, poets and composers seem to have similar experiences.

- We must, however, not get too carried away with the **romantic notion** of the creative leap into the unknown.
- Creative thinkers also characteristically work very hard.
- True the great geniuses seem to find life fairly easy, but for most of us **ideas come only after considerable effort**, and may then require much working out.
- **Thus great ideas are unlikely to come to us without effort**, simply sitting in the bath, getting buses or dozing in front of the fire is unlikely to be enough.

The general consensus is that we may identify up to five phases in the creative process which we will call ‘first insight’, ‘preparation’, ‘incubation’, ‘illumination’, and ‘verification’.

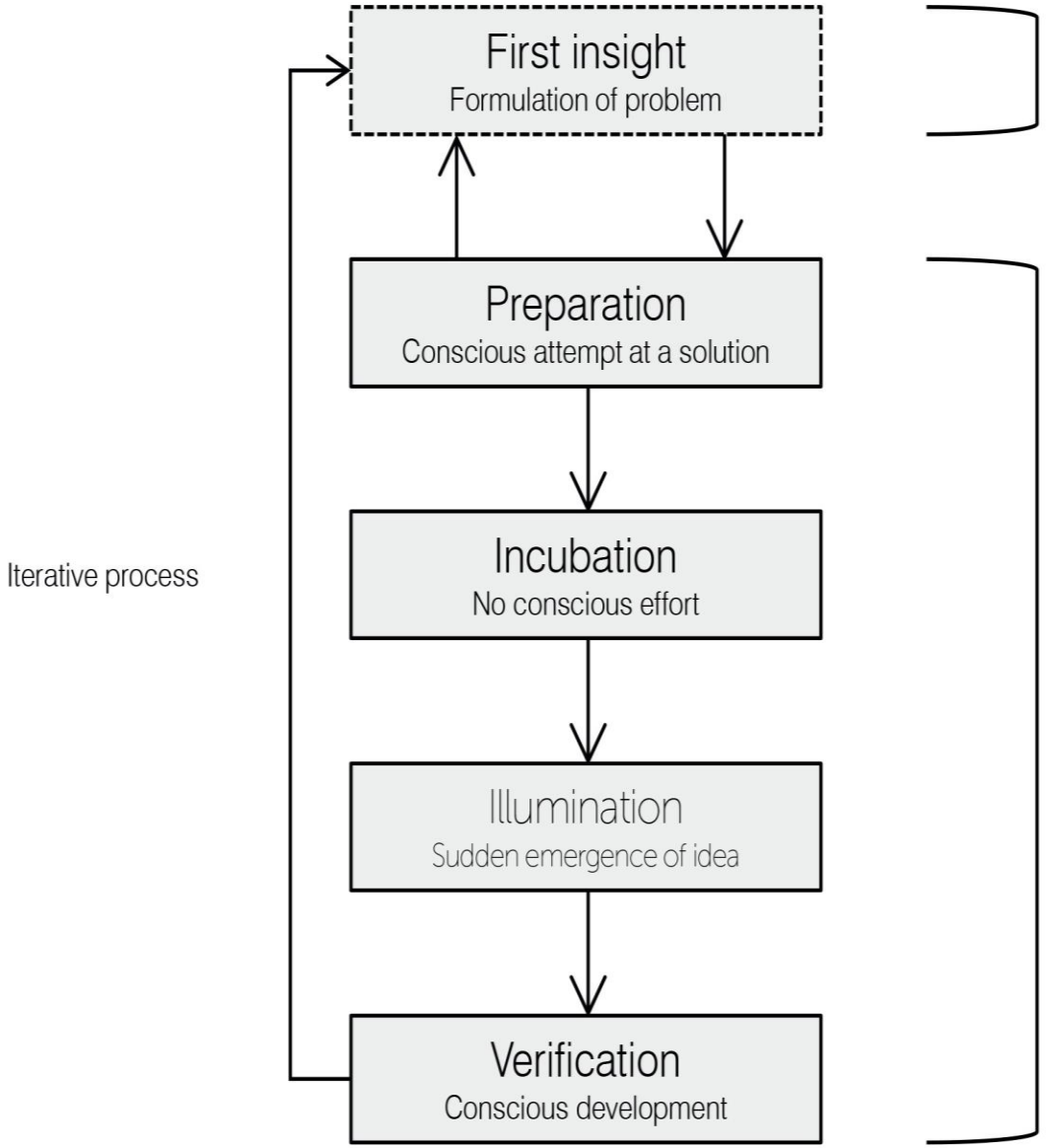


Diagram adapted by author from model variants by Graham Wallas and Bryan Lawson
(Wallas, G. 1926; Lawson, B. 2006)

Creative process

- The period of '**first insight**' simply involves recognizing that a problem or problems exist and making a commitment to solve them.
- Thus the problem situation is formulated and expressed either formally or informally in the mind.
- **In design situations**, the problem is rarely clearly stated at the outset and this phase may require considerable effort.
- It is interesting that many experienced designers report the need for a clear problem to exist before they can work creatively.

Creative process

- Santiago Calatrava has produced some of the most imaginative and innovative structures of our time, but all in response to specific problems.

Creative process

- The next phase of **'preparation'** involves considerable conscious effort in the search for a solution to the problem.
- As we have seen, in design at least, there is likely to be some coming and going between this and the first phase as the problem may be reformulated or, even, completely redefined as the range of possible solutions is explored.
- What seems common ground amongst those who write about creativity, however, is that this **period of intense, deliberate, hard work** is frequently followed by the more relaxed period of **'incubation'.**
- Not too many, but just so that you can rest one groove in the mind and work in another.' Thus the practising designer and the design student alike need several things to work on in order not to waste time while one 'incubates'.

Creative process

- Some argue that during the incubation period the mind continues to **reorganize and re-examine** all the data which was absorbed during the intensive earlier periods.
- The incubation period may also bring a line of thought to a stop, and when we return to the problem we find ourselves freer to go off in a new direction than we were before.
- **"Illumination"**
- Finally we come to the period of **'verification'** in which the idea is tested, elaborated and developed.
- Frequently the verification period will reveal the inadequacy of an idea, but the essence of it might still be valid.
- Perhaps this will lead to a reformulation of the problem and a new period of investigation, and so on.

Speed of working

- This is characteristic of the descriptions we have from many good designers about their working methods.
- Philippe Starck talks of working intensively in order to ‘capture the violence of the idea’.
- Starck famously claims to have designed a chair on an aircraft flight during the period of take-off while the seatbelt signs were on!
- In describing this intensive period of investigation a number of architects have likened it to **juggling**.

The creative personality?

- We can raise the question as to whether or not some people are naturally more creative than others.
- **Is creativity correlated with intelligence or are there some relationships between creativity and personality**? Psychologists have studied highly creative people in the search for answers to these questions.
- One study of exceptionally creative scientists (Roe 1952) found that they were characteristically very intelligent, but **also persistent and highly motivated, self-sufficient, confident and assertive**.
- He found his creative architects to be poised and confident, though not especially sociable.
- They were also characteristically intelligent, self-centred, outspoken and, even, aggressive and held a very high opinion of themselves

- **The creative personality?**
- Intelligence does seem to play some part in creative talent.
- Mackinnon recorded that while 'no feeble-minded subjects have shown up in any of our creative groups', **this does not mean that very intelligent people are naturally highly creative**.
- The kinds of tests used by psychologists to measure creativity normally differ from the traditional intelligence test.
- The typical intelligence test question asks the subject to find a correct answer, usually through logical thought, whereas the creativity test question is more likely to have many acceptable answers.

The creative personality?

- More recently, the differences between the ‘intelligent’ and ‘creative’ groups has been seen as a tendency to excel in either **convergent or divergent thinking**.
- Hudson has conducted a whole studies series of schoolboys groups measured to have high performance at these two types of thinking skills.
- He has shown that, generally, high convergent ability schoolboys tend to be drawn to the sciences while their more divergent counterparts show a preference for the arts.
- In fact, science is no more a matter of purely convergent production than the arts are exclusively a matter of divergent thought.
- This concentration on convergent or divergent thought may therefore prove something of a red herring in developing our understanding of creativity.

The creative personality?

- We have already seen how successful scientists may be regarded as highly creative and how their ideas generate a complete shift in the way we see things.

The creative personality?

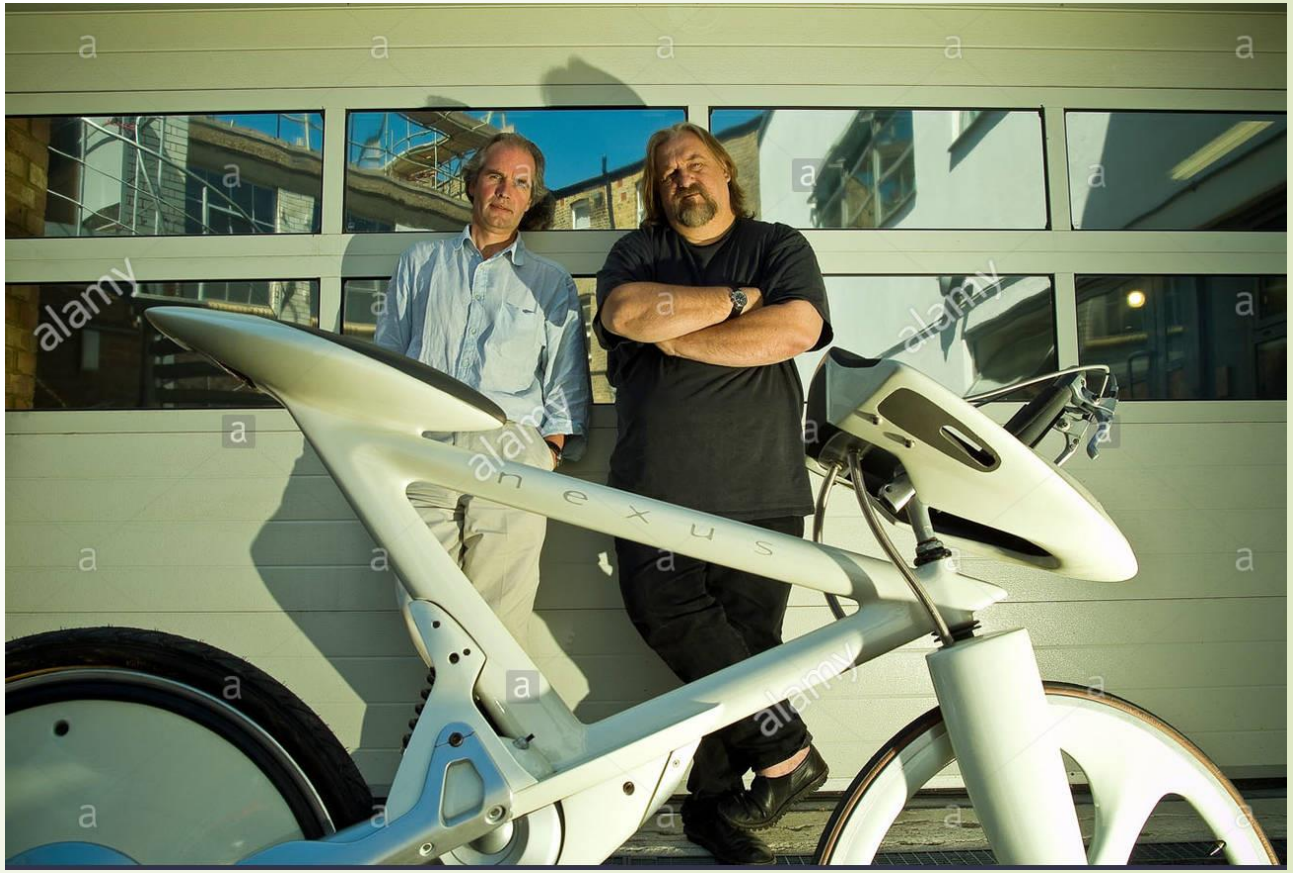
- Research on creative designers is most closely associated with Donald MacKinnon (1962, 1963, and 1967) and Frank Barron (1965).
- Creative architects - those whom the members of the profession regarded as the most creative - were found by MacKinnon to be **highly productive and highly intelligent people with a great need for achievement.**
- They are also people who value their independence highly, have a high degree of tolerance for ambiguity, value intellectual and cognitive matters, and who are very concerned with their adequacy as individuals.
- It must be noted that high intelligence (as measured on standard I.Q. tests) may be a prerequisite for creativity; but it cannot be equated with high creativity. **In other words, one could be intelligent but not creative.**

Creativity in design

- Whilst we have seen that both convergent and divergent thought are needed by both scientists and artists, it is probably the designer who needs the two skills in the most equal proportions.
- Hertzberger suggested that we must be careful to draw the distinction between originality and creativity in design.
- In the competitive and sometimes rather commercial world of design, the novel and startlingly different can sometimes stand out and be acclaimed purely for that reason.
- But being creative in design is not purely or even necessarily a matter of being original.

Creativity in design

- The product designer Richard Seymour considers good design results from ‘the unexpectedly relevant solution not wackiness parading as originality’.



Creativity in design

- The famous architect, Robert Venturi has said, **for a designer, 'it is better to be good than to be original'.**
- Hertzberger, Seymour and Venturi all seem to be cautioning us against the recent trend to value the purely original-looking design without testing it to see if it really can fulfil the demands placed on it.
- Good designers tend to be at ease with the lack of resolution of their ideas for most of the design process.
- Those who prefer a more ordered and certain world may find themselves uncomfortable in the creative three-dimensional design fields.
- Characteristically designers seem to cope with this lack of resolution in two main ways: by **the generation of alternatives** and by **using 'parallel lines of thought'**..


Assignment

Analyze the five phases of the creative process with sketch.


THANK
YOU
FOR
YOUR
ATTENTION