




Module 1 : What is Design

Lecture 3 : Creative Thinking Process; Design students should learn to imagine; Concept of Jugaad

The Lecture Contains:

-  Creative Thinking Process
-  Design students should learn to imagine
-  Concept of Jugaad

 **Previous** **Next** 

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Creative Thinking Process

Creative thinking is driven by Divergent Thinking and **Convergent Thinking** in every decision that one makes. Creativity in Design involves these two components.

“Your creative thinking ability is built around three human thought processing functions:

1. Strategy: How you organize and plan your thought processes. Evaluation of thoughts and ideas and future plans based on any given situation or problem.
2. Knowledge base: Your acquired information on a group of subjects and problem domains. You draw on this information in order to be able to solve problems or add new thinking to situations.
3. Motivation and your attitude: Such factors are often driven by your personality, energy levels, perseverance and your self-confidence which in turn are acquired from a lifetime of experiences and interactions. Motivation and attitude affects the decisions and direction that you take in order to get to a desired result.”

(Ref.http://www.innovation-creativity.com/creative_thinking.html ; Nov. 23, 2012)

Design Process requires organized thought process to evaluate various conditions. Based on the evaluation specific future planning is to be processed so that the necessary situation or problem may be solved. The probable solution can be dealt with based on previous knowledge and experiences. Therefore, for any design solution previous knowledge would naturally become the foundation for the future activities. Past knowledge leads to self-confidence, persuasion, motivation to achieve the desired goal. Therefore, creative thinking will go through a complex process of disciplined imaginative direction in order to achieve the goal.



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Design students should learn to imagine

Imaginative power begins from childhood. As a child we could all imagine hundreds of things but we do not know when we stopped imagining. Rightfully once Einstein had said that ‘imagination is more important than knowledge since knowledge has limitation while imagination encircles the world’. A balanced curriculum and amicable environment helps to provoke people to imagine, which would motivate to do something differently. Imagine is the key to creative pursuit.

“A leading business school did a study that showed that its graduates performed well at first, but in ten years, they were overtaken by a more streetwise, pragmatic group. The reason according to the professor who ran the study: ‘We taught them how to solve problems, not recognize opportunities. When opportunities knocked, they put out their ‘Do not Disturb’ signs.” (Roger Von Oech, ***A Whack on the SIDE of the Head***, London: Harper Collins Pub. 1990, p.27)

Therefore, be imaginative is the key to design profession. Obvious answers limits or restrict imagination to run free. Multiple choices or probable solutions widen the scope of unique solution. Creative thinking requires an attitude that allows one to search for ideas and manipulate your knowledge and experience. Taking unusual steps opens up new avenues or possibilities. Johann Gutenberg, combined two previous unconnected ideas- function of wine press squeezing the juice out of grapes and created the coin punch. Picasso found an old bicycle outside his home, removed the handle bar and the seat, and wielded them to create the Bull Head. Creative mind transform one thing into another.



Plate 3A Auto-rickshaw



3B Innovative Bicycle



3C Wash Basin-Toilet

◀ Previous Next ▶

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(Source: [https://www.google.co.in/search?hl=en&q=jugaad&bav=on.2,or.r_gc.r_pw.r_qf.](https://www.google.co.in/search?hl=en&q=jugaad&bav=on.2,or.r_gc.r_pw.r_qf.&bpcl=39314)

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Concept of Jugaad

In the recent years the **Jugaad** culture in North India has produced amazing things by recreating products. Most of the ideas are synthesis of unique opportunity leading towards simple yet extremely useful product solution. Motorbike engine (plate 3A) and front body is assembled with trailer to carry goods and people have revolutionized the rural transportation. It is locally fabricated with very basic workshop facility. Bicycle Handle (plate 3B) welded with automobile steering wheel has developed an interesting concept. The wash basin (plate 3C) connected to commode shows a new concept for valuable water saving. Plenty of water drains through the wash basin every day. The innovative design has demonstrated excellent useful product. Thus, playing with the knowledge helps to creating ordinary to extraordinary things. Opportunity of having things around is the fertile ground for creative crops.

Albert Szent-Györgui the Nobel Prize winning physician said, “Discovery consists of looking at the same thing as everyone else and thinking something differently.”

Creative thought can be divided into ‘divergent’ and ‘convergent’ reasoning. The role of divergent and convergent thinking in design will be discussed in later period under ‘functional’ and ‘non-functional’ elements in design.

Exercise: Find out **four** common household consumer products and analyze their non-functional elements. Give probable best creative solutions (at least two of solutions on each case) with suitable sketches.

◀◀ Previous Next ▶▶