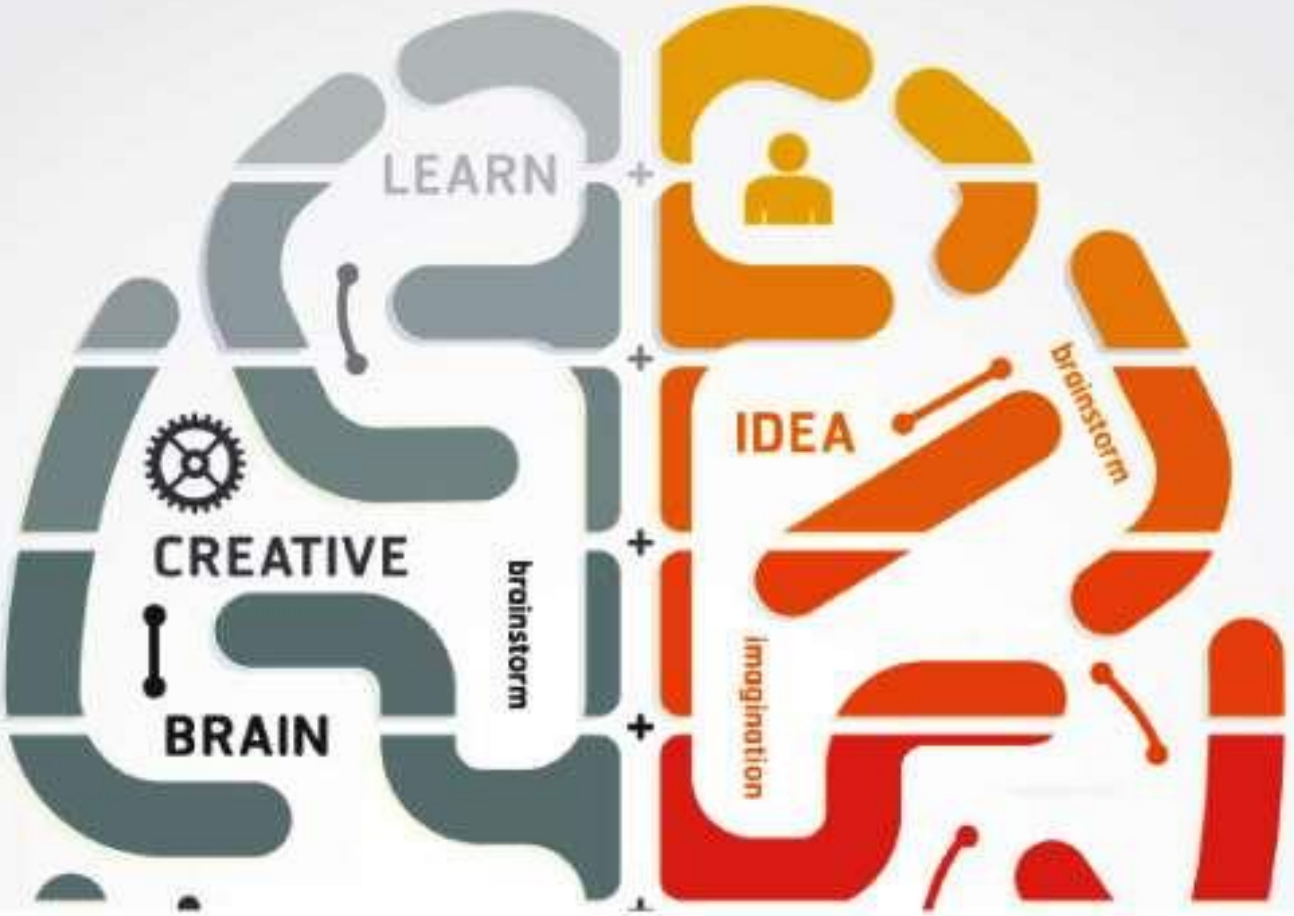
Design Thinking



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About the Tutorial

Design thinking has become an integral part of corporate strategy and planning these days. The five-step model of design thinking has been explained extensively in this tutorial, along with case studies and exercises. This tutorial teaches the principles of design thinking.

Audience

This tutorial is meant for designers, engineers, planners, managers, strategists, economists, teachers, and many other professions.

This tutorial will be useful for anyone who works in an industry that deals with addressing the needs of customers or works for external clients. The tutorial will help professionals from diverse spheres of profession to find innovative solutions to the problems that they or their departments are facing.

Prerequisites

Before proceeding with this tutorial, you are expected to have a calm mindset and be open to exploring the suggestions mentioned here.

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1. Design Thinking - Introduction

Design thinking is a methodology that designers use to brainstorm and solve complex problems related to designing and design engineering. It is also beneficial for designers to find innovative, desirable and never-thought-before solutions for customers and clients.

Design thinking is used extensively in the area of healthcare and wellness, agriculture, food security, education, financial services, and environmental sustainability, to name a few. Design thinking has helped in the digital space, contributed to the development of physical products, spurred social innovation projects and much more.

The **iterative design process** helps the designers to involve clients and customers in meaningful ways. It is not just a strategy to come up with feasible solutions to a problem, but also a method to **think of unimaginable solutions** and then trying to **make them not just feasible, but also viable**.

Design thinking **is a blend of logic, powerful imagination, systematic reasoning and intuition** to bring to the table the ideas that promise to solve the problems of the clients with desirable outcomes. It helps to bring creativity with business insights.

Origin of Design Thinking

It is a methodology of design that originated in Stanford University and is today considered to be one of the most sought after skills in the industry. The concept of design thinking began only with a few domains under consideration, but is now found to be applicable to a myriad of disciplines, ranging from medicine and aeronautics to management, operations, and human resource planning.

The teaching and acquisition of design thinking skills has assumed so much importance that it is now being taught at some of the leading universities of the world, as well as the leading global corporate houses across the globe.

Infosys Ltd., India's second largest IT-based company providing business consulting, information technology and software engineering services, has also made design thinking a mandatory skill to be acquired by each of its employee.

Stanford University in the United States and the University of Potsdam in Germany have also promoted design thinking, citing it as one of the most useful skills for professionals.

Application Across Professions

In the wake of such support and encouragement for design thinking by big entities, it is easy to understand the significance and influence that design thinking will assume in the near future for all sorts of professions. Design thinking is a **methodology for finding simplicity in complexity, improving quality of experience** with the designed products and serving the needs of customers by **addressing the target problem** faced by them. Design thinking is at the core of the development of efficient and effective strategies for organizational change.

Design thinking is a **five-step process**, where each step focuses on a specific goal. Each of the steps is independent of the next step but is borne out of the previous step. Design thinkers are expected not to think of the following steps when working on one step.

For example, it is not recommended to think of solutions, when the problem is being defined. The problem definition must be written in detail without missing any point, even if it makes finding a solution difficult. In this tutorial, we will understand the importance of design thinking, its impact of strategy development and we will then explore each of the steps of design thinking.

2. Design Thinking - Definition

The idea of using design as a way of solving complex problems in a simplified manner in sciences originated in the book, 'The Sciences of the Artificial', authored by Herbert A. Simon in 1969. The same purpose was achieved for design engineering by the book 'Experiences in Visual Thinking', authored by Robert McKim in 1973.

In 1987, **Peter Rowe's book titled, "Design Thinking"** described methods and approaches that planners, designers, and architects use. The work of Robert McKim was consolidated by Rolf Faste at Stanford University during 1980s to 1990s and then, David M. Kelly adapted design thinking for business interests. David M. Kelly founded IDEO in 1991.

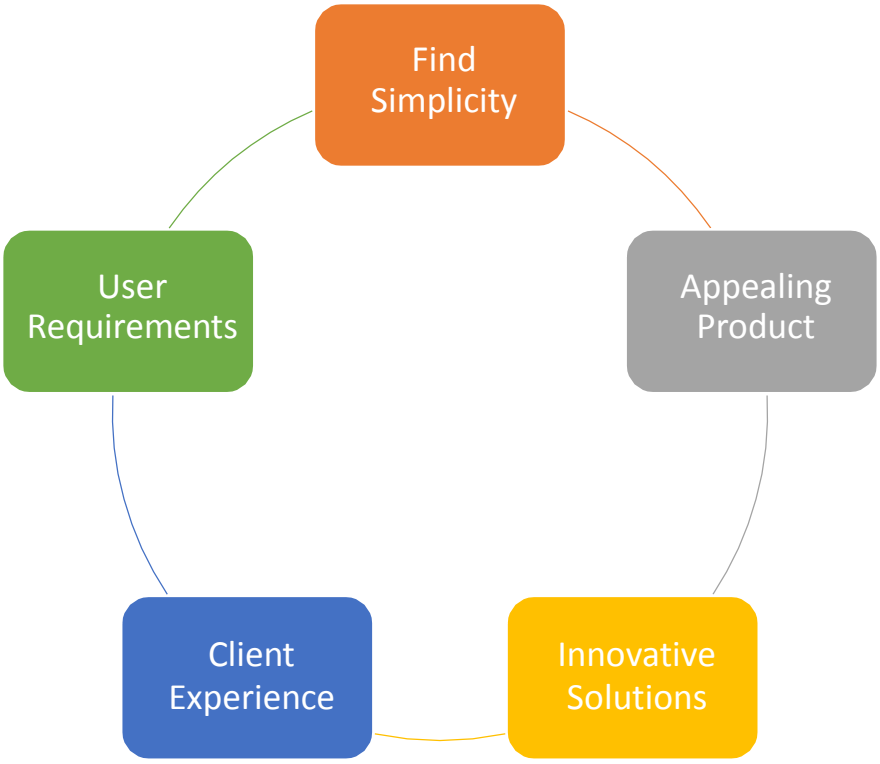
Most of the industries trying to solve customers' problems and address their needs are failing just because they look at the problems outside in. However, many problems can be solved in a better manner if we look at them inside out.

According to an article in *Forbes*, a large number of problems faced by organizations worldwide are multi-faceted and are a part of increasingly complex business models. The expansion of global transactions, growth of international partnerships and decentralized base of human resources are leading to challenges that require a global outlook and hence, a different outlook to solve the problems.

Features of Design Thinking

Such problems require multidimensional solutions. Design thinking helps in this regard. It not only assists a professional to come up with a solution, but it also helps the organization to gain a competitive edge over its rivals. Following are the benefits conferred by design thinking. These are incidentally also the distinguishing features of design thinking.

- Finding simplicity in complexities.
- Having a beautiful and aesthetically appealing product.
- Improving clients' and end user's quality of experience.
- Creating innovative, feasible, and viable solutions to real world problems.
- Addressing the actual requirements of the end users.


Find Simplicity
Appealing Product
Innovative Solutions
Client Experience
User Requirements

Most of the challenges in the world do not get solved because people trying to address those problems focus too much on the problem statement. At other times, the problem statement is overlooked and there is too much stress to find a solution.

Design thinking helps to **gain a balance between the problem statement and the solution** developed. A design-oriented mindset is not problem focused, but solution focused and action oriented. It has to involve both analysis and imagination. Design thinking is the way of resolving issues and dissolving problematic situations by the help of design.

Strategy of Innovation

Design thinking is also considered to be a strategy for innovation. It leads to dramatic improvements in innovation. This is why design thinking forms the **core of effective strategy development and seamless organizational change**. Anything that involves human interaction, from products, services, processes etc., can be improved through design thinking. It all depends on the designer's way to create, manage, lead, and innovate.

Use of Design Thinking

The basic principle of design thinking is that innovation can be disciplined. Innovation is not an elusive entity that only a few genius people can experience. It is, rather, a practice that can be systematically approached by a set of practical and meticulous tools, methodologies, and frameworks.

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