Module 1

SYLLABUS:

PROCESS OF DESIGN

Understanding Design thinking Shared model in team-based design – Theory and practice in Design thinking – Explore presentation signers across globe – MVP or Prototyping

Understanding Design Thinking

Introduction to Design Thinking

- Meaning of Design Thinking

- Definition of Design Thinking

- Origins of Design Thinking

- Design Thinking in the organizations

- Features of Design Thinking

- Principles of Design Thinking

- Stages of Design Thinking

- Benefits of Design Thinking

Theories of Design Thinking

- Theories of Thinking Modes

- Theory of Problem Solving

- Theory of Creative Blocks

- Theory of Creative Process

- Theory of Creative thinking education and Meta Cognitive Control

Practices of Design Thinking

Team Based Design Thinking

Understanding Design Thinking

Meaning of Design Thinking

Design Thinking is not just the property of designers — all the great inventors of engineering, science, literature, art, music, and business have used it. Design thinking supports in developing, teaching, learning, and applying strategies to solve complications in a creative manner in the projects and processes of the business.

Definition of Design Thinking

Design thinking is a term used to denote a set of strategic, conceptual, and practical processes in which design concepts are developed (product proposals, structures, equipment, communications, etc.). Many key concepts and aspects of design thinking have been identified through studies, across all different design fields, design concepts and design work in both laboratory and environmental contexts.

Design considerations are also linked to the establishment of products and services within the business and social environment. Some of these guidelines have been criticized for simplifying the design process and undermining the role of technical knowledge and skills

Origins of Design Thinking

The methods and concepts of design thinking, although promoted by developing companies and design consultants, ranging from a wide range of fields including software development, engineering, anthropology, psychology, art, and business.

Design ideas as they exist today have evolved collaboratively in various fields and industries. Over 50 years, and even more have emerged and merged into the quasi-Darwin system of natural selection. These have been integrated, documented, and promoted by leading design firms (such as IDEO and Frog) and educational institutions (such as Stanford's d.school, and Rotman School of Management), and have been increasingly accepted by the industry.

While these evolutionary and experimental design experiments have led to methods process in the form of design thinking tools and methods.

1963: The idea of using Design as a way of solving complex problems in a simplified manner in sciences originated in the book 'The science of the Artificial' authored by Herbert A. Simon

1973: The idea of design was achieved for Design Engineering by the book 'experiences in visual thinking' authored by Robert McKim

1982: Design methodology is defined by "cross" the study of the principles, practices and procedures of design are developed .and includes the study of how designers work and think

1987: Peter Rowes Book Titled "design thinking" describes methods and approaches that planners, designers and architects use

1980s to 1990s: The work of Robert Mckim was consolidated by Rolf Faste at Stanford university during this period 1991 David M Kelly Founded IDEO and adapt Design thinking to business interests

2009: The design thinking process itself is human centered, offering methods for inspiration, ideation and learning to designers –Brown

2012: Apply the study of design thinking principles in engineering.

2015: Verbal protocol analysis, cognitive ethnography, controlled laboratory experiments, and other formal methods from cognitive science have been rigorously applied in engineering

2017: Design thinking reflected in many applications like prototyping, solution-based method is often useful way to encourage inspiration, ideation and organization learning and human centered methods

Design Thinker in the organizations

Any individual who has the following traits can be design thinker in the organizations, namely

1. Individual who has the concern for the individuals and who know the working challenges in at workplace

2. Knowledge of multi -functionality of the organization

3. Vision for developing right process in the organization

4. Capability to understand the problems on the job and ability to work on the problems related to the jobs of the organization.

Features of Design Thinking

The features of design thinking are as under

1. Design thinking understands from the perspective of the customers and provides solution for improving the product and service quality in the organization.

2. The role of design thinking is to collect feedback from the customers and employees by iteration of prototyping

3. Expanding the range of solutions to the problems identified in the organization and employee better customer and employee satisfaction

4. Enable the design thinkers to develop new products, features or services to customer and process satisfaction.

5. Providing and eco-system through the interaction with the employees, technical capabilities and customers.

Principles of Design Thinking

At this point, it seems to the reader that design thinking is about how to think and act as it is about process. The process is obviously important, and there are certain, tested tools that need to be considered within each mode, each with its own set of inputs, outputs, and well-defined functions.

Aside from the process, design thinking is also about thinking, where the concept can be thought of as an integrated set of beliefs and attitudes.

Human Focused Design Thinking: The process that understands from the perspective of the human including the employees and customers. While doing so design thinker needs to consider the individuals, beliefs, values and attitudes.

Diversity to work in a team: Design thinking needs to consider individuals from different background and train to work in a team. While group membership should be balanced throughout the project, it may be wise to occasionally include outside-organization participants — such as clients, suppliers, and other topic professionals — in specific modes or activities.

Comprehensive: Although details are important, design experts are also able to identify and consider relationships, collaborations, and communication between seemingly different ideas.

Flexibility and unconventional comfort: Design thinking is best suited to deal with problems and opportunities described in an incomprehensible way, and requires great flexibility in terms of both content and methodology (e.g., with the required repetition of modes and categories).

Communication Skills: Willingness to communicate and work in a variety of ways, including speaking, visual, and touch. Design experts design and build prototypes, without the perceived lack of skill or competence.

Stages of Design Thinking

We will focus on the five-phase Design Thinking model proposed by the Hasso-Plattner Institute of Design at Stanford (d.school). D.school is a leading university when it comes to teaching Design Thinking. The five stages of design thinking, according to d.school, are as follows: Empathy, Explain (problem), Ideate, Prototype, and assessment. Let's take a look at five different categories of Design Thinking

1. Empathy

The first step in the design process is to gain a critical understanding of the problem you are trying to solve. This involves consulting with experts to find out more about the area of concern, to consult and empathize with people to understand their experiences and motives, and to immerse themselves in a visible environment to gain a deeper personal understanding of the issues involved. Sensitivity is very important in a person-centered design process like Design thinking, and sensitivity allows designers to set aside their ideas about the world in order to gain an understanding of users and their needs. Depending on the time limit, a large amount of information is collected in this section for use during the next phase and to develop a better understanding of users, their needs, and the problems that underpin the development of that particular product.

2. Define

During the Define stage, you combine the information you have created and collected during the empathy phase. This is where you will analyze what you have seen and put it together to explain the core values that you and your team have identified so far. You should want to describe the problem as a problem statement in a person-centered way. For example, instead of describing a problem as your wish or business need, such as, “We need to increase our market share of food products among young girls by 5%,” the best way to describe the problem would be, “Young girls need nutritious food to thrive, be healthy and grow.”

Define Forum will help designers in your team come up with great ideas for creating features, functions, or any other features that will allow them to solve problems or, at the very least, allow users to solve problems themselves with minimal difficulty. In the Definition section you will begin to move on to the third phase, Ideate, by asking questions that can help you seek ideas for solutions by asking: "How can we ... a food product or company service?"

3. Ideate

During the third phase of the design thinking process, designers are ready to begin producing ideas. You have grown to understand your users and their needs in the Sensory section, and have analyzed and summarized what you saw in the Define section, and ended up with a problem-focused problem statement. With this solid domain, you and your team members can start "thinking outside the box" to see new solutions to the problem statement you created, and you can start looking at other ways to look at the problem. Ideas at the end of the Ideation section to help you investigate and evaluate your ideas to find the best way to solve a problem or provide the necessary features to avoid it.

4. Prototype

The team of designers will now produce less expensive, discounted versions of the product or specific features found within the product, in order to be able to investigate solutions to problems developed in the previous section. Prototypes may be shared and tested within the team itself, in other departments, or in a small group of people outside the design team. This is the testing phase, and the aim is to identify the best solution for each problem identified during the first three phases. Solutions are applied to prototypes, and, individually, are investigated and adopted, developed and tested, or rejected on the basis of user knowledge. By the end of this section, the design team will have a better idea of

the existing product problems and problems, and have a clear idea of how real users will behave, think, and feel about the product and services.

5. Test

Designers or testers firmly test the complete product using the best solutions identified during the simulation phase. This is the final stage of a 5-phase model, but with a recurring process, the results produced during the testing phase are often used to redefine one or more problems and inform users' understanding, usage conditions, and how people think, behave yourself, and be sensitive, and compassionate. Even in this phase, changes and improvements are made to solve problems and gain as much insight into the product and its users as possible.

Benefits of Design Thinking

1. **It helps to overcome creative challenges**: Design Thought gives you the freedom to look at problems in many ways. It involves a lot of brains to come up with the best ideas, which helps to improve students 'knowledge.

2. **Helps to meet customer requirements effectively**: As we discussed earlier, design thinking involves developing prototypes when testing and using customer feedback repeatedly to ensure quality assurance. By following a successful design idea, your product will eventually meet the needs of customers.

3. **It helps to increase your knowledge of Design Thinking**: You will do a lot of experiments in the design thinking process. You will always try to improve your model by using customer feedback to ensure customer satisfaction.

Theories and Practices of Design Thinking

Design scholars continue to discuss theoretical developments in the design thinking Different theoretical perspectives have been used in research into design thinking: one stream of research through protocol analysis to catch the ways designers are making sense of their own working processes another examines methods for teaching designedly thinking to design students through normative decision-based protocol. 'Design thinking' is much younger than 'design thinking', but it has grown rapidly. In one interpretation, 'design thinking' may also be a way for managers to 'understand design' in a more straightforward way than through the design management discourse that is built on a managerial platform.

When design management started as an academic area in the 1970s, it was taught by designers aiming to help management scholars and practitioners understand what design is and why it is relevant to the organization.

Theory of Thinking Modes

Building on the Guilford's studies there are three basic modes of thinking: Analytical, judicial, and synthetic. Analytical thinking is the process for separation of things from the visible relationships in the process and production in the organization. Judicial thinking is comparing and making judgments based on in-depth analysis in the thinking. Synthetic thinking is the process to combine two things and ideas with the intention of making new process and combination.

Theory of Problem Solving

There are three types of problems; they are analytical, judicial and synthetic. The concept of analytical problems includes precise challenges and solution which are based on the small number of challenges and have precise way of working on the challenge. Judicial problems are influenced by complex challenges and which require solution that require correct direction based on the problem statement present through complex challenge. Synthetic problems are based on the open concept that has various ways of working of resolving the problem.

Theory of Creative Blocks

According to this theory there are barriers to the creativity of the individual and the individual expresses inability to access creativity and hence there is an block created in the creativity process of the individual.

Theory of Creative Process

A creative process is the choice between the inner and outer, conscious and unconscious mind of the individual through the process of reflection and active collaboration of the individual.

Theory of Creative thinking education and Meta Cognitive Control

According to this theory creative thinking is increased through creative education and supports in creating higher creative achievement among the individuals. This process also increased the individual creative potential and supports in developing right mindset for creativity of the individual.

Practices of Design Thinking

At this stage the processes are presented from the perspective of designers and consultants.

1. Design ideas from the perspective of designers show that ideas are used for customer problem as this is driven by organizational culture. Therefore, design thinking has an impact on the culture of the organization and therefore designers need to consider the impact of design thinking on the organization.

2. Design thinking from a consultant's perspective demonstrates that supporting design thinking in providing support for complex business issues and providing solutions to complex business problems in the organization

Team based Design Thinking

Team size has a direct impact on design thinking process of the organization; following aspects are to be taken care in the design thinking for an organization.

1. Building the right type of team: Team members from diverse background and specialization support in providing solution to the challenges faced by the design team

2. Right Team Culture: Involvement of the team members is an important component for developing right culture; hence, rules, regulations and process of the team have an impact on developing right culture in the team. Therefore, design thinking team needs to have the right culture for developing right directions in the team process of the design team.

3. Development of higher inclusions, cohesion, interaction and confidence support in developing effective team for design thinking.

4. Effective communication among the members supports in sharing the ideas and solutions for the design teams in design thinking.

5. The role of leadership is an important aspect in design thinking, team leader support and encouragement support the design thinking team in the organization.

MVP (Minimum Viable Product)

Definition: Minimum Viable Product or MVP is a development technique in which a new product is introduced in the market with basic features, but enough to get the attention of the consumers. The final product is released in the market only after getting sufficient feedback from the product's initial users.

Description: Minimum Viable Product or MVP is the most basic version of the product which the company wants to launch in the market. It could be a car, website, TV, or a laptop. By introducing the basic version to the consumers, companies want to gauge the response from prospective consumers or buyers.

This technique helps them in making the final product much better. With the help of MVP concept, the research or the marketing team will come to know where the product is lacking and or what are its strengths or weaknesses.

MVP has three distinct features. One is that it will have enough features for consumers to purchase the product (it becomes easier for the company to market it), the other is that it will have some sort of a feedback mechanism wherein users would be able to send their feedback about the product. And, lastly it should have enough future benefits for consumers who to adopt the product first.

The idea is to get feedback from the consumers which will in turn help in making the desired changes in the final product. MVP actually tests the usage scenario rather that is much for more helpful for the company to make changes to the final product.
Let's understand the concept with the help of an example. MVP is a popular concept in the online space, where a website is launched with basic features to find out how consumers respond to the product displayed on the website.

It could be a consumable product, daily use product or even a service provided by a website provider. The idea is to start small and then take cues from the users as to what exactly are they expecting from the product. Some of the noted examples are Dropbox, Groupon, Zappos, etc.

Expected Benefits

The primary benefit of an MVP is you can gain understanding about your customers' interest in your product without fully developing the product. The sooner you can find out whether your product will appeal to customers, the less effort and expense you spend on a product that will not succeed in the market.

A **prototype** is an early sample, model, or release of a product built to test a concept or process. It is a term used in a variety of contexts, including semantics, design, electronics, and software programming. A prototype is generally used to evaluate a new design to enhance precision by system analysts and users. Prototyping serves to provide specifications for a real, working system rather than a theoretical one. In some design workflow models, creating a prototype (a process sometimes called **materialization**) is the step between the formalization and the evaluation of an idea.

A **prototype** can also mean a typical example of something such as in the use of the derivation '**prototypical**'.

Prototypes explore different aspects of an intended design:

- A **proof-of-principle prototype** serves to verify some key functional aspects of the intended design, but usually does not have all the functionality of the final product.
- A **working prototype** represents all or nearly all of the functionality of the final product.
- A **visual prototype** represents the size and appearance, but not the functionality, of the intended design. A **form study prototype** is a preliminary type of visual prototype in which the geometric features of a design are emphasized, with less concern for color, texture, or other aspects of the final appearance.[1]
- A **user experience prototype** represents enough of the appearance and function of the product that it can be used for user research.
- A **functional prototype** captures both function and appearance of the intended design, though it may be created with different techniques and even different scale from final design.
- A **paper prototype** is a printed or hand-drawn representation of the user interface of a software product. Such prototypes are commonly used for early testing of a software design, and can be part of a software walkthrough to confirm design decisions before more costly levels of design effort are expended.

Characteristics and limitations of prototypes

Engineers and prototyping specialists seek to understand the limitations of prototypes to exactly simulate the characteristics of their intended design.

It is important to recognize that by their very nature, prototypes represent some compromise from the final production design. This is due to not just the skill and choices of the designer(s), but the inevitable inherent limitations of a prototype due to the "map-territory relation". Just as a map is a reduced abstraction representing far more detailed actual territory, or "the menu represents the meal" but cannot capture all the detail of the actual delivered food: a prototype is a necessarily inexact and limited approximation of a "real" final product.

It is possible to use prototype testing to reduce the risk that a design may not perform as intended, however prototypes generally cannot eliminate all risk. There are pragmatic and practical limitations to the ability of a prototype to match the intended final performance of the product and some allowances and engineering judgement are often required before moving forward with a production design.

Building the full design is often expensive and can be time-consuming, especially when repeated several times—building the full design, figuring out what the problems are and how to solve them, then building another full design. As an alternative, rapid prototyping or rapid application development techniques are used for the initial prototypes, which implement part, but not all, of the complete design. This allows designers and manufacturers to rapidly and inexpensively test the parts of the design that are most likely to have problems, solve those problems, and then build the full design.

The most common use of the word prototype is a functional, although experimental, version of a non-military machine (e.g., automobiles, domestic appliances, consumer electronics) whose designers would like to have built by mass production means, as opposed to a mockup, which is an inert representation of a machine's appearance, often made of some non-durable substance.

Difference between a prototype and MVP

Prototypes are sometimes confused with MVPs. While they both help validate your app idea, the purpose they serve and how they are approached are fundamentally different.

Functionality: Prototypes aren't made to be fully functional with complete features. MVPs are typically fully functional and contain complete features though minimal.

Complexity: Prototypes can be as simple as sketches on paper or as complex as a clickable, digital model on your phone. MVPs are fully built whether as a web or mobile app or by leveraging 3rd party platforms to deliver the main value of the app.

Usage: Prototypes are used in user interviews. MVPs can be used in user interviews but are primarily released publicly or to a private set of users.

Purpose: Prototypes can be used to validate the problem and the design of the solution. MVPs help validate the solution with additional insight into usage.

Timeline: Prototypes are typically quicker to create. MVPs take more time to create depending on the strategy.

Visibility: Prototypes are private. MVPs are mostly public.

MCQ QUESTIONS

1. What is design thinking?

- When you think about designs
- A way of building something
- **A method for creative problem solving**
- Steps for making lightbulbs

2. Design Thinking is less about thinking and more about …

- Speaking
- Listening
- **Doing**
- Writing

3. The first step in Design Thinking where we understand the problem, is called …

- Define
- Prototype
- **Empathize**
- Test
- Ideate

4. What step of design thinking has you brainstorm multiple possibilities for a solution?

- Empathize
- Define
- **Ideate**
- Prototype
- Test

5. What step of design thinking has users try out your prototype?

- Empathize
- Define
- Ideate
- Prototype
- **Test**

6. Andrew created a new and distinctive product that can save consumers time and money. This would be considered:

- **Innovation**
- Ideaition
- Realization
- Creativity

7. During which stage would you consult experts to learn more about the areas of concern and to gain an understanding of other people's experiences?

- Prototype
- Define
- Ideate
- **Empathize**

8. What are the steps of Design Thinking Process?

- Understand > Draw > Ideate > Create > Test
- **Empathise > Define > Ideate > Prototype > Test**
- Empathise > Design > Implement > Produce > Test
- Understand > Define > Ideate > Produce > Try

9. Design thinking typically helps in _____

- **Innovation**
- Data analytics
- Financial planning
- Operational efficiency

10. Design Thinking is a Linear Process True or False?

- True
- **False**

11. A college is redesigning its website Current students are the main users of the website Which one of the below elements should definitely be on the website?

- College rules and regulations
- Information on faculty members
- **Information about courses**
- Alumni details

12. Which of the following well known consulting firms are offering Design Thinking as a solution?

- Mckinsey and Co
- BCG
- Bain and Co
- **All of the above**

13. Which of the below is incorrect?

- PepsiCo has turned Design Thinking into its strategy
- GE Healthcare has built a MR scanner for children using Design Thinking
- AirBnB avoided bankruptcy and turned profitable using Design Thinking
- Google has a 3 step process to bring about new innovation
- **All of the above are correct**

14. After you empathise, the next step is to ……

- Prototype
- **Define**
- Test
- Ideate

15. Being an experimental phase, continuous iterations can take place here, which phase it refers to?

- Define
- Empathise
- **Prototype**
- None of them

16. MVP stands for

- Most viable product
- Maximum viable product
- **Minimum viable product**
- None of above

17. The goal of the prototype phase is?

- To understand what component of your idea didn't work
- To understand what component of your idea work
- **Both of them**
- None of them

18. The ultimate goal of design thinking is to help you design better

- Services
- Products
- Experiences
- **All of above**

19. User persons are created during which phase of design process

- **Design stage**
- Discover stage
- Develop stage
- None of the above

20. Identify the correct statement

- **To derive the power of design thinking, individuals, teams, and organizations must have a leap of faith about the existence of a solution.**
- Leap of faith is the page in the manual of design thinking containing the core philosophy about design thinking.
- Design thinking presupposes that some people are inherently creative and become successful in creative product development. The team should have at least one such person.
- None of the above.

21. You would interview people to gain an understanding of how they feel during the ——— Stage of Design thinking.

- Prototype
- Define
- Ideate
- **Empathize**

22. During which stage you gather information about people's needs and motivation?

- Prototype
- Define
- Ideate
- **Empathize**

23. When defining a problem, your problem statement should include solution

- True
- **False**

24. During which stage would you analyze observations and collect data to identify the core problem

- Prototype
- **Define**
- Ideate
- Empathize

25. During which stage would you brainstorm ideas based on your observations.

- Prototype
- Define
- **Ideate**
- Empathize

26. During which stage would you create a model of your solution

- **Prototype**
- Define
- Ideate
- Empathize

27. Which is NOT a good interview strategy for the empathy step?

- Encourage the person to talk about experiences.
- Ask follow-up questions to get more information.
- Try to uncover needs, people may or may not be aware of
- **Encourage short answers that get right to the point.**

28. Which is NOT an aspect of the Define step of design thinking?

- Create a composite user to give perspective to the solution.
- Develop a Point Of View statement to state user's need.
- **Define as many possible solutions to the problem as possible.**
- Recognize a challenge with a "How Might We" question.

29. Which is NOT a guideline for the ideate step

- **Considering the practicality of each idea before sharing it.**
- Generate as many ideas as possible.
- Reference the How Might We question frequently.
- Don't worry about how good other people's ideas are.

30. Which statement about the prototype step is true?

- A prototype needs to be a realistic model.
- **The point is to get your idea out into the physical world.**
- You shouldn't worry about how someone might interact with it.
- You shouldn't consider your composite user at this stage.

31. What is the first model/design of a product called?

- Rough Draft
- Draft
- **Prototype**
- MVP

32. How Might We' questions are generated during which stage of the design thinking process?

- Empathize
- Define
- **Ideate**
- Test

33. The purpose of MVP is NOT to

- **Be able to test a product hypothesis with maximum resource.**
- Accelerate learning.
- Reduce wasted engineering hours.
- Get the product to early customers as soon as possible.

34. Which is NOT a guideline for the ideate step?

- **Consider the practicality of each idea before sharing it.**
- Generate as many ideas as possible.
- Reference the HMW question frequently.
- Don't worry about how good other people's ideas are

35. In prototyping one should keep in mind

- Fail-fast
- Fail- cheap
- Fail- often
- **All of these**

36. Which of the following Firm is-associated most with Design Thinking?

- IKEA
- **IDEO**
- IDEA
- ASCI

37. Design thinking is

- Thinking about the design
- Designing ways in which people think
- Asking users to solve problems.
- **Defining, framing, and solving problems from user's perspectives.**

38. Which of the following principles are NOT considered for Design Thinking?

- Embrace experimentation.
- Human-centric design
- Pattern identification for problem solving.
- **Profit-centric design**

Module 2

SYLLABUS:

Tools for Design Thinking

Real-Time design interaction capture and analysis – Enabling efficient collaboration in digital space – Empathy for design – Collaboration in distributed Design

Tools of Design Thinking

Visualization

Journey Mapping

Value Chain Analysis

Mind Mapping

Rapid Concept Development

Assumption Testing

Prototype

Co-Creation

Learning Launches

Story Telling

Tools of Design Thinking

The tools of design thinking are as under;

1. **Visualization** means any activity that takes information beyond text as well as numbers and pictures, maps, and stories. At its simplest level, imagination is about creating visual images and images and moving away from our trust as masters in numbers and text. At a deeper level, it is about visualization: creating mental images, clear representations of our ideas and details about customers and their information, in a way that makes them human and attractive.
2. **Journey mapping** is an ethnographic research method that focuses on tracking a "journey" of a client as he or she interacts with the organization while still working on receiving a service, with special

attention to heightening and reducing emotions. Mapping experience is used to identify needs that customer may be able to articulate.

3. **Value chain analysis** examines how an organization works with value chain partners to produce, market, and distribute new offerings. This analysis provides ways to create a better value for customers in the series and reveals important clues about the skills and goals of partners.

4. **The mind map** is used to represent how ideas or other objects are linked to the main idea and so on. Mind maps are used to produce, visualize, organize, and classify ideas to look at patterns and details that provide important design conditions.

5. **Rapid Concept development** is a tool to use the design details and terms we have developed to develop new business opportunities. When people hear the word "creative process," mental development may be the only thing they can think of, and they often equate it with the brain.

6. **Assumption testing** is a tool for expressing important assumptions that are less attractive to a new business idea and using available data to assess the feasibility of these assumptions. This approach acknowledges that any new business idea is actually an informed speculation about what customers want and what they will appreciate.

7. **Prototype** is a test model of a proposed solution used to test or validate ideas, design assumptions and other aspects of its consideration quickly and cheaply, so that the designer / participants can make appropriate refinements or possible changes along the way.

8. **Co- creation** is based on the belief that the presence of users is essential to the creative process, as users provide an understanding of what is important to them. At your core, this means that co-creation is any process that brings users and designers together to work towards a shared goal.

9. **Learning Launches** is the study for designer to explore the fundamental assumptions of total production potential for new growth in the market place. In contrast to the complete release of a new

product, the learning implementation is a quick and inexpensive learning test to collect market-driven data.

10. **Story telling** in a logical way: summarizing a story. It is a close relative of imagination — one way to make new ideas sound real and compelling. Visual storytelling is a very compelling type of story. Every good presentation — whether analytical or designative — tells a fascinating story.

REVIEW QUESTIONS

1. Which of the following are NOT tools of visualization?
   a. Maps
   b. Images
   c. Stories
   d. Videos

2. _____storytelling is the most compelling type of story

a. Aural

b. Visual

c. Textual

d. All of the above

3. Mind maps are used to _____ideas

a. Generate

b. Visualize

c. Structure

d. All of the above

4. Journey mapping is also called _____mapping

a. Path

b. Experience

c. Conduct

d. Feedback

5. Which of the following are NOT tools of Design Thinking?

a. Co-creation

b. Prototyping

c. Mind Mapping

d. Online Marketing

6. Which of these are NOT components of a mind map?

a. Branches

b. Arrows

c. Central Idea

d. All of the above are components

7. Journey mapping maps which phase of activity of service for a customer?

a. Before a service

b. During a service

c. After a service

d. All of the above

8. _____is used with the objective of identifying needs that customers are often unable to articulate.

a. Mind mapping

b. Experience mapping

c. Story telling

d. Rapid Concept Development

9. Value chain analysis examines how an organization interacts with value chain partners to _____new offerings.

a. Produce

b. Market

c. Distribute

d. All of the above

10. Learning launches are designed to test the key underlying value-generating assumptions of a potential new-growth initiative in the marketplace.

a. True

b. False

c. Cannot be said

11. Journey mapping is useful for identifying…...

a. few needs of customers

b. all needs of customers

c. needs that customers are able to articulate

d. needs that customers are often unable to articulate

12. A prototype is a simple experimental model of a proposed solution used to
    a. test ideas
    b. validate ideas
    c. Both
    d. None of the above
13. _____is an analysis of persons, groups, events, decisions, periods, policies, institutions or other systems that are studied holistically by one or more methods.
    a. Prototyping
    b. Literature Study
    c. Co-creation
    d. Case Study
14. Which of these are NOT components of a mind map?
    a. Branches
    b. Arrows
    c. Central Idea
    d. All of the above are components
15. Learning launches are designed to test the key underlying value-generating assumptions of a potential new-growth initiative in the marketplace.
    a. True
    b. False
16. Journey mapping is also called feedback mapping.
    a. True
    b. False
17. The value chain helps in creating better value for customers.
    a. True
    b. False
18. _____is used with objective of identifying needs that customers are often unable to articulate.
    a. Mind mapping
    b. Experience mapping
    c. Story telling
    d. Rapid concept development
19. In which tool the test product is launched in the market for a quick experiment.
    a. Co-creation

b. Rapid iteration

c. Assumption testing

d. Learning launch

20. What tool is used to help visualize and understand user needs and pain points?

a. Personas

b. User stories

c. User cases

d. Job stories

21. Collaborative teamwork is essential in design thinking for

a. Equal Importance to all members

b. Solving multifaceted problems

c. Better failure management

d. Unbiased Selection of ideas

22. What element of User Experience Design would the design strategy fall under?

a. Interaction Design

b. Experience Strategy

c. User Research

d. Information Architecture

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Module 3

SYLLABUS:

Design Thinking in IT - Design Thinking to Business Process modelling – Agile in Virtual collaboration environment – Scenario based Prototyping

Design Thinking in Information Technology

Meaning of Business Process Management
Advantage of Business Process Modelling
Design Thinking in Business Process Modelling
Agile in Virtual Collaboration
Scenario Based Prototyping

Design thinking for Business Process Modeling

Business Process Modelling (BPM)

Business process modelling (BPM) is a way of dividing business processes into their basic components: functions and performed for the business. BPM shows, clearly and concisely, how a product or service changes as it moves through the organization process, usually in the near real time. Procedure models facilitate communication between stakeholders: Business analysts and process partners. BPM models provide shared understanding so that everyone can provide information to various process-related steps: Process Map, Process Detection, Process Imitation, Process Analysis and Process Development. It has come in the last few decades and has replaced the organisation's previous effective packages: Time and Movement (TMS) and Total Quality Management (TQM). Procedure models facilitate communication between stakeholders: Business analysts, process partners and developers.

Advantage of Business Process Modelling

1. Align operations with business strategy
2. Improves process communication
3. Increase control and consistency
4. Improve operational efficiencies
5. Gain competitive advantage

Design Thinking in Business Process Modelling

By disclosing how things are done in the organization, and comparing that with how they should be done, BPM highlights dependence and interpersonal relationships, process, and technology — and when those elements are ready to be improved. Design thinking is also focused on development, but it takes the experience of the end user or customer as a starting point. Basically, design thinking uses empathy to understand how people feel about using a service or product, including where their frustration lies, and then builds on that knowledge to build progress, with the ultimate goal of improving customer lives and knowledge.

Agile in Virtual Collaboration

Agile methods are so popular in the software industry however they have received so much praise that other industries also want to pursue its benefits in their businesses. Working in a global environment makes these structures very challenging to function effectively. The Agile method can accommodate changes at any time compared to the waterfall method, and that is why collaboration between clustered groups slows down processes faster. Without communication; interactions, improvements, editing, reviews, review times etc. it also greatly reduces time and effort. Remote or distributed performance is considered competitive and is considered a suitable performance model. Some companies also offer it as an option to its employees. Businesses want to nurture talent day and night, utilize the best talent that can be found locally, the cheapest labor in the world, the higher productivity and the more strategic reasons. With the growing demand for remote operation, it is unacceptable to state that faster methods

will not work with distributed teams. Although a few temptations will emerge, with the help of tools and techniques for moving to a remote workplace it is possible.

1. **Allow Openness**: As a company or leader create a transparent environment. Provide a sense of confidence in the team members for the decisions they make to organize sessions with them so that they align these decisions with the goals and vision of the company. Do not keep your responsibilities confidential. Explain the functions of the functions. Make sure the results are public as a whole. Collect the answer. Establish open communication channels.
2. **Establish a culture of continuous improvement**: Call for improvement within the team. See opportunities for improvement and get ideas from the group. Listen to the suggestions and take appropriate action. The Agile Goal drives continuous development and thus team members are open to opportunities for development. Generate calculated tests to use improvement efforts.
3. **Communication:** Communication is probably the most important skill in any group. the way you organize your communication is what determines the outcome. Practice deep communication at all levels. Too much emphasis on communication is key. Communication does not only have to happen through emails, calls or meetings, but in business most communication is done with the help or ERP tools that help you stay busy all the time.
4. **Rhythm Building**: There are three essential elements in a fast-paced workflow: Clarity, testing, and flexibility. Scrum is also called the three pillars of Scrum (Scrum Guide, 2005). It is important that we build a tempo that works close to these Scrum pillars. I have already said that drive to create a collaborative team that is a leading Agile excellence.
5. **Develop a culture of courage and flexibility**: This also goes hand in hand with the idea of immediate failure. Failure is not bad; it's okay to fail. Here, though, the main issue is the immediate failure. Set up a place where the team has the courage to take action to try something new. The idea is to reduce delays. Find failure quickly and re-engineer your plans.
6. **Establish a stable environment and work life balance**: A well-distributed team usually keeps its normal working hours leading to overtime or working overtime. Establish rules and ensure that no member of the team violates these terms, prompting partners to apply this principle. Plan accordingly and set reasonable expectations.

7. **Visualize the whole thing:** The most important step. Task planning is a simple utility tool that gives you a clear interpretation of tasks to be completed. Establish a solution that allows team members to monitor the flow of work, show who is working on it, guide together and be able to choose the right priority and at the right time. This solution will help you to scan problem areas and restore them properly to improve your processes.

Scenario Based Prototyping

Design thinking is best if concrete prototypes can be used to visualize new products and services. However, in complex software systems with multiple users such portable prototypes are not possible. To overcome this problem, a situation-based prototyping method can be proposed to design complex software programs based on models, both structural and behavioral models. This approach will support step-by-step enrichment and interoperability of the model, the sequence between the artifacts collected during the previous design phases and scenarios. The models provide a more legitimate result of the process of designing low-level engineering works, so that the gap between design and engineering is narrowed. Circumstances define the sequence of events, reflecting the activities of one or more individuals in the real world. Goals should be realistic, detailed and concise. Since this is difficult to do quickly, it is best to cover only a limited time in a situation. We distinguish between terms of use, which is a type of dialogue and independent analysis that occurs today in real-world settings, and design conditions, which are updated versions of usage.

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REVIEW QUESTIONS

1. The 6 stages of the waterfall method are….
   - **a.** Analysis, development, creation, testing, production, upkeeping
   - **b.** This, one's, just, six, random, words
   - **c.** Interview, make, code, validate, check, prototype, fix
   - **d.** **Analysis, design, implement, test, install, maintain**
2. BPM stands for
   - **a.** Building Product Management
   - **b.** Business Product Management
   - **c.** Basic Product Management
   - **d.** **Business Process Management**
3. _____is an iterative and incremental method of managing development and design.
   - **a.** Waterfall Model
   - **b.** Cyclic Methodology
   - **c.** All these options
   - **d.** **Agile Methodology**
4. Design Thinking is best suited to addressing problems at the intersection of
   - **a.** business and society
   - **b.** logic and emotion
   - **c.** **all these options**
   - **d.** human needs and economic demands
5. Collaborative teamwork is essential in design thinking for
   - **a.** Equal Importance to all members
   - **b.** Solving multifaceted problems
   - **c.** **Better failure management**
   - **d.** Unbiased Selection of ideas
6. Design thinking follows
   - **a.** Waterfall Model

b. Waterfall and Agile methods

c. **Agile methodology**

d. None of these

7. The waterfall method is ----

a. pouring water on your keyboard and hoping it makes software

b. way to develop software quickly

c. **a linear approach to software development**

d. Unorganized

8. The waterfall method is suitable for making...

a. a purchase method for a large company like amazon

b. **software for small companies**

c. software that needs to be completed in a few weeks

d. systems with constantly changing user requirements

9. Which of these methods produce prototypes?

a. Waterfall

b. **RAD**

c. Agile

d. None of these

10. Which of these methods involves the end users the most?

a. Waterfall

b. **Agile**

c. RAD

d. Telling them to do it themselves

11. Which of these statements about agile is correct?

a. someone who is agile can-do sick flips

b. **There is a continuous delivery of software from the early stages of the software**

c. agile is a software development method

d. agile is linear approach to software development

12. What is agile methodology?
    - **a.** Agile methodology is a sequential approach to software development.
    - **b.** **Agile methodology is an iterative approach to software development.**
    - **c.** Agile methodology is a circular approach to software development.
    - **d.** Agile methodology is a prototype approach to software development.
13. When agile methodology was introduced?
    - **a.** **2001**
    - b. 2009
    - c. 2000
    - d. 2004
14. How much time does each iteration in agile methodology take?
    - **a.** 1-2 weeks
    - **b.** 2-3 weeks
    - **c.** **1-4 weeks**
    - **d.** 1-2 months
15. Does agile methodology ask user's feedback?
    - **a.** **Yes**
    - **b.** No
16. How many roles are there in agile methodology?
    - **a.** 3
    - **b.** **2**
    - **c.** 4
    - **d.** 5
17. Do you think the agile methodology is best suitable for a small development project?
    - **a.** Yes
    - **b.** **No**
18. Which of the following is/are the advantages of using agile methodology?
    - **a.** Customer is satisfied.

b. Application's development is rapid.

c. Last-moment changes are also accepted.

d. All of the above.

19. Does every iteration in agile methodology go through a testing phase?

a. Yes

b. No

20. In which model testers and developers work together in the project?

a. Agile model

b. Waterfall model

21. Which one of these is correct order of agile methodology?
a. Plan-Design- Develop-Test-Deploy-Review-Launch
b. Plan-Develop-Design-Deploy-Test-Review-Launch
c. Plan-Deploy-Develop-Design-Review-Launch-Test
d. Plan-Design-Develop-Deploy-Review-Test-Launch

22. Who is the primary focus of the design thinking?
a. The designer **b. User** c. business d. Technology

23. Developing _____ around the prototype helps to communicate it in context.
a. Box b. PowerPoint **c. Story/Skit** d. Website

24. What is the main focus of design thinking in IT?
a. Efficiency b. Cost-effectiveness
c. User-centeredness d. Innovation

25. The way of dividing business process into their basic components is called
a. Building Process Management
b. Building Product Model
c. Business Process Modelling
d. Basic Product Management

Module 4

SYLLABUS:

DT For Strategic Innovations

Growth – Story telling representation – Strategic Foresight - Change – Sense Making - Maintenance Relevance – Value redefinition - Extreme Competition – experience design - Standardization – Humanization - Creative Culture – Rapid prototyping, Strategy and Organization – Business Model design.

Design Thinking for Strategic Innovation

Meaning of Strategic Management

Meaning of Innovation Management

Types of Innovations

- Disruptive vs. Sustaining innovation
- Radical vs. incremental innovation
- The Innovation Matrix
- Architectural vs. Modular Innovation

Strategic Innovation

Features of Strategic Innovation

Scope of Strategic Innovation

Design Thinking and Strategic Innovation

Practices of Integrating Design Thinking in Strategic Innovation

Design Thinking for Strategic Innovation

Strategic Management

Strategic management is the process of setting goals, procedures, and objectives in order to make a company or organization more competitive. Typically, strategic management looks at effectively deploying staff and resources to achieve these goals.

Innovation Management

It is the concept which has multiple aspects and dimensions and are contributed based on the multiple disciplines of the study that has a various theories and frameworks.

Types of Innovations

There are four types of innovations which are (1) Disruptive vs Sustaining innovation (2) Radical vs incremental innovation (3) Innovation matrix (4) Architectural vs Modular innovation

1. **Disruptive vs. Sustaining innovation**

The concept of disruptive innovation is related to the concept, product or service which will create new value to the existing market and also create a completely new market. While the sustaining innovation is based concept of improving and growing the existing markets.

2. **Radical vs. incremental innovation**

Radical innovation happens when a new technology completely disrupts existing business or economy and creates a new business model. Incremental innovation, in turn, refers to a series of small, gradually built improvements to existing products, processes or methods to maintain competitive position over time.

3. **The Innovation Matrix**

To clarify the aforementioned dimensions and to better demonstrate them, we took all four terms and combined them with our Innovation Matrix. Radically disruptive – Innovation that harnesses new technology and creates a new business model. Has no clear competitors. Radically sustaining – Improvement on a product or process in an existing market that provides new value for the customer. Incrementally disruptive – An incremental improvement in technology that leads to a dramatic disruption. Incrementally sustaining – Small and cumulative changes in an existing product, technology or service.

4. **Architectural vs. Modular Innovation**

Architectural innovation is described as the reconfiguration of existing product technologies. Modular innovation (or component innovation), on the contrary, is the exact opposite. In modular innovations, one or more components of a product is changed while the overall design stays the same.

Strategic Innovation

Strategic innovation is an organization's process of reinventing or redesigning its corporate strategy to drive business growth, generate value for the company and its customers, and create competitive advantage. This type of innovation is essential for organizations to adapt to the speed of technology change.

Features of Strategic Innovation

Strategic innovation demands for holistic approach towards the activities of the organizations at various levels in the organization. The features of strategic innovation are as under;

1. This concept is based on the long-term perspectives and is developed based on the developing strategic which matches the innovations in the organization.
2. The main objective of strategic innovation is to create competitive space for the products and services offered by the organization.
3. The process of strategic innovation combines business process with creative solutions to the problems in the organizations.
4. Collect information about the business from unconventional sources and provide innovativestrategy for the challenges in the organization.
5. Development of the organization process which can accommodate the changes in the organization and build robots business process and procedures in the organization.

Scope of Strategic Innovation

The scope of strategic innovation is based on the seven dimensions which include (1) Managed innovation process (2) Strategic alignment (3) Industry foresight (4) Customer Insight (5) Technology (6) Organization Readiness (7) Implementation

1. Managed Innovation: In this process the facilitating process includes external and internalperceptive with regards to organization capabilities, process, procedures and customers.

2. Strategic Alignment: This is created for development of shared vision, goals and actions among the key stakeholders in the organization.
3. Industry Foresight: This process includes deeper understanding of the driving forces, influence of the new technology, competition dynamics and changing market trends.
4. Customer Insight: Strategic innovation provides deeper understanding of the customers' needs and demands and provide innovative strategic for the growth of the market.
5. Technology: The perspective of technology is assessed through strategic innovation on the aspect of internal technology capabilities, organization capabilities and reaching higher customer satisfaction.
6. Readiness of the organization: Strategic innovation provides an insight on the readiness of the company to the changing innovations and also provides insights on the capability of the organization to accept the changes in the business environment.
7. Implementation: Strategic innovation provides an insight on the process of implementation of the strategy through the aspect of process and procedures and policies which align the organization to the innovation in the organization.

Design Thinking and Strategic Innovation

Design Thinking is a human-centered approach to innovation that integrates customer emotion and empathy, the possibilities of digital tech and analytics, and the requirements for business success. Integration of the strategy supports in the reaching the market better and improving the competitiveness of the firms in the market.

In order to link design thinking and strategic innovation. Design thinking is based on the mental activity in understanding the things and process of the organization. While strategic innovation is based on the concept of strategic management. Interaction between the design thinking and strategic innovation provides following benefits, they are as under;

1. Concept of design thinking has supported in developing products and services which match the expectation of the customers and there by supporting the strategy of the organization.
2. Design thinking provides an opportunity to integration of new ideas and thinking which is essential for the development of right strategy for the organization.

Practices of Integrating Design Thinking in Strategic Innovation

Design thinking and strategic innovation has four practices they are (1) Reviewing (2) Simulating (3) Conversing (4) Collaborating.

Reviewing: Design thinking is based on the data collected through various sources, which include customers, employees and other stake holders. Based on the data collected protype is developed through the concept of design thinking. These development support in development of right strategy for the innovation in the organization.

Simulating: The concept of simulation provides insights on the experience of the individual in the real world of business. Simulating opens up strategy practice because it provokes managers to form an empathetic engagement with the customer experience, thereby making the market context immediately appraisable.

Conversing: Conversing was particularly important in enabling collective reflection and getting agreement between participants with diverse understandings of the strategy. In other words, this aspect of design-led strategizing amplified managers' attention to the real fit within product-market fit.

Collaborating: This practice was especially useful when teams were dealing with complex issues that could easily be forgotten or lost in conversational dialogue. Rather than trying to empathetically understand each manager's perspective (as in the conversing practice) the focus in collaborative translation was on generating a shared solution to a complex problem.

REVIEW QUESTIONS

1. Design thinking is also known as
   a. Adaptable Enquiry
   b. Strategic design thinking
   c. Transformation by design
   d. All of the above

2. is the way to narrow down the thoughts to reach at the final solution
   a. Convergent thinking
   b. Divergent thinking
   c. None of them
   d. Both of them

3. Who is called the Father of Strategic Management?
   a. Chandler
   b. Igor Ansoff
   c. Michael Porter
   d. John Nash

4. What is the starting point of Strategic Intent?
   a. Goal
   b. Objective
   c. Vision
   d. Mission

5. Which of the following is not a major element of the strategic management process?
   a. Formulation strategy
   b. Implementing strategy

c. Evaluating strategy

d. Assigning administrative tasks

6. An organisation strategy ____

a. Remains set in place longer than the mission and objectives

b. Generally, forms over a period of time as events unfold

c. Trends to be formed at the same time the mission is developed

d. None

7. The primary focus of strategic management is

a. Strategic analysis

b. The total organisation

c. Strategy formulation

d. None

8. Strategic Management handles

a. External issues

b. Administrational issues

c. Internal issues

d. Management issues

9. The following are considered grand strategies, except for

a. A retrenchment strategy

b. Strategic business unit

c. A growth strategy

d. Related diversification

10. Strategic business units

a. Are found in one-business organisations

b. Carry out strategies assigned by the CEO

c. Implement the marketing function's strategic planning and management decisions

d. Develop their own unique way of competing

11. The three organisational levels are

a. Corporate level, business level, functional level

b. Corporate level, business unit level, functional level

c. Corporate strategy level, business unit level, functional level

d. None

12. Competitive advantage can be best described as

a. Increased efficiency

b. What sets an organisation apart

c. A strength and the organisations

d. Intangible resources

13. The corporate level is where top management directs

a. All employees for orientation

b. Its efforts to stabilise recruitment needs

c. Overall strategy for the entire organisation

d. Overall sales projections

14. What are the guides to decision making?

a. Rules

b. Procedures

c. Goals

d. Policies

15. Low cost, Differentiation and Focus are examples of

a. Corporate strategies

b. Operational strategies

c. Business strategies

d. Functional strategies

16. What type of strategy is stability strategy?

a. Corporate level

b. Functional level

c. Strategic level

d. Business level

17. The term strategy is derived from a_____word.

a. Latin

b. Greek

c. French

d. German

18. The strategy was developed by the visionary chief executive in which mode of strategic management?

a. Planning mode

b. Strategic mode

c. Adaptive mode

d. Entrepreneurial mode

19. What type of range is the impact of strategies on the general direction and basic character of a company?

a. Medium range

b. Short range
c. Long-range
d. Minimal

20. A possible and desirable future state of an organisation is called

a. Mission
b. Strategy implementation
c. Strategy formulation
d. Vision

21. Hierarchy of Strategic Intent:

i. Vision > Mission > Goals > Objectives > Plans
ii. Mission > Vision > Goals > Objectives > Plans
iii. Plans > Vision > Mission > Goals > Objectives
iv. Goals > Vision > Mission > Objectives > Plans

a. i
b. iii
c. iv
d. ii

22. Selling all of a company's assets for their tangible worth is called

a. Divestiture
b. Concentric Diversification
c. Liquidation
d. Unrelated integration

23. Which environment can create new markets and new business segments?

a. Political environment

b. Economic environment

c. Sociocultural environment

d. Technological environment

24. The word tactics is most likely to be associated with

a. Business strategy

b. Corporate strategy

c. Operational strategy

d. All of the above

25. Divestment is what kind of strategy?

a. An asset-reduction strategy

b. A weakness-reduction strategy

c. A product-reduction strategy

d. A cost-reduction strategy

26. Design thinking is an approach to come up with new solutions to-----problems.
a) Easy **b) Difficult** c) Interactive d) Highly creative

27. What element of User Experience Design would the design strategy fall under?
a) Interaction Design **b) Experience Strategy**
c) User Research d) Information Architecture

28. Which of the following is key element of design thinking?
a) Creativity b) Efficiency c) Scalability **d) All the above**

29. Which of the following is NOT a stage in the Design thinking process.
a) Test b) Analyse **c) Plan** d) Implement

30. Who is the primary focus of the design thinking?
a) The designer **b) User** c) business d) Technology

31. Which one of these is correct order of agile methodology?
a) Plan-Design- Develop-Test-Deploy-Review-Launch
b) Plan-Develop-Design-Deploy-Test-Review-Launch
c) Plan-Deploy-Develop-Design-Review-Launch-Test
d) Plan-Design-Develop-Deploy-Review-Test-Launch

32. Developing ___around the prototype help to communicate it in the contexts.
a)Box b) PPT **c) Story/Skit** d) Website

32. What is the main objective of the Innovation?
a) To improve existing product or services b) To generate revenue
c) To create new product or services **d) All the above**

Module 5

SYLLABUS:

Design Thinking Workshop

Design Thinking Work shop - Empathize, Design, Ideate, Prototype and Test

Design Thinking Workshop

Focus of Design Thinking Workshop

Need for Design Thinking Workshop

Stages of Design Thinking Workshop

Design Thinking workshop

Design thinking workshop is a collaborative, work-based session built around the Design Thinking process. Usually, these are done in person, but you can adapt and run a long-distance design workshop. It can take up to two hours, two days, or a whole week — all depending on the context of the workshop.

Focus of Design Thinking workshop

1. Sensitivity: Addressing the real user problem and building empathy for targeted users / customers.
2. Ideas, innovation, and problem solving: Generating multiple ideas and possible solutions.
3. Prototyping and testing: Creating prototypes that are less reliable in the ideas produced, suitable for testing to real users or agents.

Need for Design Thinking Workshop

1. Design Thinking into your process will help you to quickly come up with viable, user-centric solutions which results in improved customer satisfaction and greater cost saving to the organization.
2. Design Thinking workshops enables to build better organization culture with the focus of creativity and supports in growth of the organization.

3. Supports in developing skills of the employees by providing training in the domain of problem solving and providing better solutions to the challenges on the job.
4. Development of innovation in a team culture through collaborated learning in the design thinking workshop.
5. Design thinking workshop supports in developing competitive advantage for the organization and in return develops better products and services for the organizations.

Stages of Design Thinking Workshop

Design thinking workshop are divided into two stages: they are, planning stage and the workshop stage. The aspects in the planning stage include (1) Learning Goals (2) Pre-Meeting (3) Checking of the ambience for workshop (4) Developing flow of activity (5) Study Material for the workshop.

The workshop stage includes (1) Introduction (2) Define Problem Statement (3) Idea Testing (4) (5) Prototype (6) Testing (7) Feedback (8) Closing of the workshop

Planning Stage of Design Thinking workshop

Learning Goals: During this stage of design thinking workshop learning goals for the workshop needs to be developed, the organizing team can collect information from the participants, members of the unit head and other stake holders related to the challenges faced in the organizations. During this stage learning outcomes are be developed for focused outcome of the workshop. The learning outcomes needs to well connect with the objectives of the workshop. This aspect supports in developing right culture for the workshop on design thinking.

Pre-Meeting: During this stage of workshop the organizing team needs to check for the following aspects for making the workshop effectively, they are right information on the purpose of the workshop, secondly, preparation of agenda for the workshop. Thirdly, giving detailed information to the design thinking trainers on the background of the trainees and work profile which include designation, age and experience of the participants.

Checking the ambience of the workshop: The design thinking needs right ambience of the conduct of the workshop which include seating arrangement, venue and right electronic devices. The role of ambience is important for the improving the learning process of the trainees during the workshop.

Flow of Activities: Design thinking workshop needs to prepare the right type of activities for providing right insights on the challenges related to the organization's problems. The organization needs to collaborate with the design thinking trainers for development of activities for the workshop. The activities include the games, lecture material and discussion points with the participants. This supports in developing the right flow of activities during the workshop and achievement of learning goals of the design thinking workshop.

Study Material for the workshop: Participants for the workshop needs to be provided with right study material related to the workshop. The study material needs to be provided to the participants one week the workshop, this supports them to prepare well for the workshop. The study material needs to be aligned with the flow of activities and agenda of the workshop on design thinking.

In the next stage of design thinking workshop, the workshop process has to be conducted, during this stage following aspects are covered, they are as under;

Introduction to the workshop: During this stage participants needs to define the right thoughts that can guide the flow of the workshop. During this stage all five stages of design thinking needs to be included which are sensitivity, explain, ideate, prototype and evaluation. Further to improve the learning process, during the introduction stage. Further, to set the stage for the workshop real world success stories are be shared with the participants for improving the motivation of the participants.

Define Problem Statement: During this stage of workshop, the participants will reduce the overall design challenge to the problem specific directions, in this stage, the trainers apply concepts such as empathy mapping, in this mapping participants create vision statement and prepare documents how to approach the problem statement. Further, each participant would be allowed to present the problem

statement and describe the problem and through the discussion the trainer provides insight on relooking at the problem statement which match to address the design challenge.

Idea Testing: In the third stage of the workshop design thinking process consists of idea development and providing possible solutions to the challenges. Concept such as brainstorming and sharing of ideas is applied by the trainer during this stage of workshop. Another popular concept applied during the stage is the mind mapping and visual of the data to understand the problem and develop idea towards the solution to the problem.

Prototype: During this stage participants are allowed to build and experiment with the prototypebased on the idea presented by the participant. During this stage participants can conduct survey among the other participants and collect information from the prototype developed. During this stage, trainers might apply making the participants work in a team with an intension to provide better prototype for the idea. Further, the trainers might also apply the tool of journey mapping to understand the customers preference which supports in development of better prototype.

Testing: In this stage, the prototype developed is assessed to suit the scenario of the challenge and linked to the business process adapted in the organization. This insight is provided to the participants to match with the organization and customers. Testing stage provide greater insight on the acceptance of the prototype to the needs of the organization and provide solutions to the problem statement.

Closing of the workshop: This is the last stage of the workshop where in the trainers provide feedback to the participants and participants are motivated to apply the concept of design thinking in the working of the organization. They are appraised on the benefits of design thinking in improving the work process of an employee.

REVIEW QUESTIONS

1. David is testing his prototype. What should his next move be?
   a. Ideate and come up with more ideas.
   b. Research the people he is designing for.
   c. Collect feedback from the testers to evaluate his idea.
   d. Change his problem statement

2. Malini is in the ideate phase. What is her goal?
   a. To come up with one or two great ideas.
   b. To come up with as many ideas as possible, good and bad.
   c. To test his best idea.
   d. To figure out which problem he's going to solve

3. What is point of view (POV) in design thinking?
   a. A report from the design team about the product.
   b. A customer's opinion about interactions with your brand.
   c. A written statement of a customer's problem or need.
   d. The opinion of the manager about how to brainstorm

4. One company buying another company means
   a. Joint venture
   b. Acquisition
   c. Amalgamation
   d. Merger

5. Retrenchment is
   a. When a company experiences declining profits and makes cutbacks to improve efficiency.
   b. When a company adopts a new strategic position for a product or service

c. The sale of the complete business, either as a single going concern or piecemeal to different buyers or sometimes by auctioning the assets
d. Implement the marketing function's strategic planning and management decisions

6. When does horizontal integration occur?

a. When a firm acquires or merges with a major competitor
b. When a firm acquires or merges with an unrelated business
c. When a firm acquires or merges with a distributor
d. When a firm acquires or merges with a supplier firm

7. Sustained survival implies

a. that a turnaround is achieved, but there is little further growth
b. that a turnaround is achieved, and there is potential for further growth
c. that a turnaround is achieved, and there is a clear opportunity to employ a new growth strategy
d. that a turnaround is achieved, and it is appropriate to diversify soon

8. In which of the following scenarios is a joint venture likely to be more attractive than acquisition?

a. Horizontal integration
b. Vertical integration
c. New market entry
d. Larger resource pool

9. McDonalds is deciding whether to expand into manufacturing kitchen equipment in China. At what level is this decision likely to be made?

a. Business
b. Corporate
c. Functional
d. International

10. SWOT stands for

a. Services worldwide optimization and transport

b. Special weapons for operations for timeless

c. Strength weakness opportunities and threats

d. Strength worldwide overcome threats

11. How many cells are there in a SWOT matrix?

a. 6

b. **9**

c. 5

d. 2

12. Which of the following principles are not considered for design thinking?

a. Embrace Experimentation

b. Human-centric design

c. Profit-centric

d. Pattern identification for problem solving

13. A hypothesis is_____.

a. a wished-for result that the researcher concludes the research with

b. a complicated set of sentences that pulls variables into proposed complex relationships

c. a conjecture that is grounded in support background originating from secondary research

d. None of the above

14 What is your first model/design of a product called?

a. Draft

b. Rough Draft

c. Prototype

d. Practice Design

15. Frank Robinson defined and coined the term

a. Design Thinking

b. Mind Mapping

c. MVP

d. Hypothesis

16. _____was IDEO'S first expression of design thinking.

a. Deep-Design

b. Deep-Dive

c. Deep-Structure

d. Study-Dive

17. Human-centric design was re-interpreted as an acronym to mean

a. Hear, Create, Deliver

b. Hear, Create, Design

c. Hold, Create, Deliver

d. Hear, Compile, Deliver

18. Which of the below firm is associated the most with Design Thinking?

a. Ikea

b. Ideo

c. Idea

d. Ikei

19. Which of the following statements is correct?

a. **Design thinking is convergence-divergence process**

b. Design thinking is a linear process of product development that compulsorily involves validation at the end of the product development.

c. Design thinking is regarded as a lean start-up process.

d. Design thinking is predominantly a product development process and is not very suitable for service innovation.

e. Design thinking follows the agile process of product development

20What element of User Experience Design would the design strategy fall under?

a. Interaction Design

b. Experience Strategy

c. User Research

d. Information Architecture

21. Which one of these is a stage in design thinking workshop?

a) Planning stage b) Workshop stage

c) Both a and b d) None of these

22. Learning goals in design thinking workshop are related to

a) Define learning outcomes b) Defining learning styles

c) Mapping with the problem statement d) None of the above

23. During design thinking workshop, planning stage includes

a) Learning goals b) Pre-meeting c) checking ambience of the workshop **d) All of these**

24. During design thinking workshop, workshop stage includes

a) Idea generation b) Developing flow activity c) Study material for the workshop d) All of these

25. Which of these is not an activity in panning stage of design thinking workshop?

a) Learning goals b) Pre-meeting

c) Prototyping d) Developing flow activity

26. During the introduction of the workshop which are the stages need to be included?

a) Empathy b) Test c) Prototyping **d) All of these**

27. During which stage of the workshop, real world success stories be shared with participants for motivation?

a) Defining problem statement **b) Introduction**

c) Testing d) Prototype

28. Duration of design thinking workshop is

a) Two days b) Two hours c) A whole week **d) Depending on the context of the workshop**

29. The final stage in the workshop stage of design thinking workshop is

a) Closing of Workshop b)Testing c)Plan d) Introduction

30. Which of these is not an activity in workshop stage of design thinking workshop?

a) Define problem statement **b) Check the ambience for workshop**

c) Testing d) Prototype