

DESIGN THINKING LAB MATERIAL



**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING
AND TECHNOLOGY**

(Autonomous)

Bachupally, Hyderabad – 500090

Preface

The main objective of the material entitled “**Design Thinking Lab**” is to make the I B. Tech (CSE(AIML), CSE(DS), CSE, EEE & CE) students familiar with the basic concepts of Design Thinking in a more systematic manner. This material is written according to **GRIET (Autonomous)** syllabus. This book has been prepared to meet the requirements of Design Thinking course as per new AICTE Regulations.

This book is written and verified by the faculty of Departments of CSE, CSE(AIML), CSE(DS),EEE & CE respectively.

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A Note on Facilitation

Facilitators and teachers differ in their methods and objectives. **Facilitators gently guide participants to new insights** while teachers directly present course content that students must master. At times, facilitators may teach a new concept and teachers often facilitate discussions. However, their overall styles are different.

Facilitators and teachers perform some similar functions in a learning space. However, **their roles differ in the way they interact with learners and participants**. A facilitator helps people **discover on their own** through mediating discussions, guiding meetings or proctoring exams and study sessions. On the other hand, a teacher provides direct instruction using presentations and various classroom activities. Teachers may occasionally act as facilitators in the sense that they may encourage peer-to-peer class discussions; however, teachers ultimately explain the course content.¹

Facilitation offers everyone in the group the chance to express their ideas and to feel as if they are part of a team. Since the group arrives at a mutual conclusion, it's easier for individual members to carry out the group's goals and to feel less inclined to work on individual agendas. **A facilitator helps individuals build on their skills and learn new ones**. Facilitation serves as a **positive way to resolve conflicts and clarify misunderstandings among a diverse group of individuals**.²

Things to keep in mind while facilitating sessions:

- Ensure that all participants develop the habit of taking notes during sessions.
- Documentation of the process is essential. Encourage participants to take photographs and videos of their work after each session, and keep all their notes/rough work until the end of the course.
- For activities requiring group work, invite all participants to actively participate. It is essential to develop skills such as collaboration, communication, and active listening.
- Please be prepared before a session. Do go over the materials shared in the handbook, and do some background research before facilitating a session to ensure that it is effective and productive.
- Avoid direct instruction and focus on driving discussions amongst participants.

¹ <https://classroom.synonym.com/info-7889937-difference-between-facilitators-teachers.html>

² <https://work.chron.com/difference-between-facilitators-teachers-11510.html>



Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)

GR20A1020: Design Thinking lab

(Common to CSE(AIML), CSE(DS), CSE, EEE & CE)

Syllabus

B. Tech. I Year

L: 2 T: 0 P: 0 C: 1

Course Objectives:

1. Study a problem from multiple perspectives
2. Learn how to frame the design challenge properly.
3. Learn how to ideate, prototype and Iterate solutions.
4. Learn from the overall design process how to create value as entrepreneurs
5. Learn how to design successful products or enterprises

Course Outcomes:

1. Students will be able to identify an Opportunity from a Problem
2. Students will be able to frame a Product/Service Idea
3. Students will be able to empathize with the customers
4. Students will be able to design and develop a Prototype
5. Students will be able to pitch their idea

UNIT-I:

Introduction to Design Thinking: LRI Assessment, Introduction to Design Thinking, Understanding the Mindsets-Empathy, Optimism, Embrace Ambiguity, Make it, Learn from Failure, Iterate, Create Confidence, Creativity Convergent & Divergent Thinking

UNIT-II:

Design Thinking Methodology: The 5 Stages of the Design Thinking Process-Empathise, Define (the problem), Ideate, Prototype, and Test.

UNIT-III:

Ideation tools & exercises. Sample Design Challenge, Introduction to the Design Challenge Themes, Story telling and Tools for Innovation

UNIT-IV:

Empathize-Understand customers, Empathy Maps, Empathise-Step into customers shoes Customer Journey Maps, Define- Analysis & Drawing Inferences from Research

UNIT-V:

The Design Challenge: Define the Design Challenge, Prototyping & Iteration- Feasibility Study, Testing- Documentation and the Pitching.

TEXT BOOK :

Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School - IdrisMootee.

REFERENCE BOOKS:

1. Zero to One: Note on Start-Ups, or How to Build the Future
2. The Lean Startup: How Constant Innovation Creates Radically Successful Businesses
3. Start With Why: How Great Leaders Inspire Everyone To Take Actions.

Design Thinking *for* Entrepreneurship & Innovation

Course Handbook



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Course Format

MODULE A Introduction to Design Thinking Mindsets 6hrs	A.1 LRI Assessment Introduction to Design Thinking 2hrs	A.2 Understanding the Design Thinking Mindsets 2hrs	A.3 Creative Thinking Strategies 2hrs
MODULE B Design Thinking Methodology 6hrs	B.1 The 5 Stages of the Design Thinking Process 2hrs	B.2 Sample Design Challenge Exercise 2hrs	B.3 Framing the Design Challenge Themes 2hrs
MODULE C Storytelling & Tools for Innovation 6hrs	C.1 Understanding Users - User Personas 2hrs	C.2 Step into User's Shoes - Empathy Mapping 2hrs	C.3 Walk a Mile - Customer Journey Maps 2hrs
MODULE D The Design Challenge Bootcamp 6hrs	D.1 The Art of the Pitch 2hrs	D.2 Process Review 2hrs	D.3 Testing, Documentation & the Pitch 2hrs



MODULE A

Introduction to Design Thinking Mindsets



A.1: WHAT IS DESIGN THINKING?

- Introduction

10minutes | Facilitator's Welcome Address

Share course outline and expectations. Share details about the course structure, type of activities, and required materials for every session.

Materials to be brought by participants to every session:



Notebook



Folder



Phone



Stationery

- LRI Assessment

20minutes | Individual Activity

Participants shall begin the program by taking the LRI assessment. Each participant will receive an individual score & report based on their responses.

Note: The LRI Assessment Link is to be shared with participants - <http://bit.ly/takeLRI>

- Critical Reading & Reflection

20minutes | Individual Activity

Participants are instructed to read the following article:

Design Thinking as a Strategy for Innovation:

https://drive.google.com/file/d/1_KhrbA80wRXb_ng2EFhnt4fCSpdwe-ME/view?usp=sharing



After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- What does the term “design thinking” mean to you?
- What are the possible applications of design thinking? Can you think of any examples?
- What according to you is the most important aspect of design thinking (based on your understanding of the article)?

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

- The Marshmallow Challenge

30minutes | Group Activity - Groups of 5

MATERIALS:

- 20 sticks of (uncooked) spaghetti or straws per team
- One yard (36 inches) of masking tape per team
- One yard (36 inches) of string/thread per team (the string must be easily breakable by hand. If the string is thick, include scissors in your kit.)
- One marshmallow/ eraser per team: around 1.5 inches in size across.
- Measuring tape to measure the height of the structures.
- Countdown Timer/ stopwatch to keep track of the time.

GOAL:

In eighteen minutes, each team must build the tallest **free-standing structure** out of the materials provided. **The eraser/marshmallow needs to be on top.** The structures may **not** be taped to a surface, supported by an object, or held upright by team members.

Please refer to the activity guide:

<https://www.sessionlab.com/methods/marshmallow-challenge-with-debriefing>

Facilitator’s Guide:

<https://static1.squarespace.com/static/57c6b79629687fde090a0fdd/t/58ab5a6046c3c4e069a2842d/1487624802348/SpaghettiMarshmallow.pdf>



- Reflection - The Marshmallow Challenge

30minutes | Group Discussion: Marshmallow Challenge Groups

Reflection Questions (discuss amongst team-members and share with the entire class)

- What was the team's strategy to solve the challenge?
- What was each member's role?
- What worked well? What failed?
- What would you improve the next time?
- What learning would you take away from this exercise?

Conclusion:

VIDEO | Tom Wujec - Build a Tower, Build a Team:

https://www.ted.com/talks/tom_wujec_build_a_tow



MODULE A

Introduction to Design Thinking Mindsets

| UNDERSTANDING THE DESIGN THINKING MINDSETS



A.2: UNDERSTANDING THE DESIGN THINKING MINDSETS

- Recap

10 minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- The Innovation Triangle

20 minutes | Presentation

The innovation triangle levels:

- Intelligence
- Creativity
- Invention
- Innovation

Presentation Slides:

<https://drive.google.com/drive/folders/1DS1D3shSPvLJJ2fl-wqGcvU92TaSV0xH?usp=sharing>

- Critical Reading & Reflection

30 minutes | Individual Activity

Participants are instructed to read the following article:

Design Thinking is not a Process, it's a Mindset:

<https://drive.google.com/open?id=1GFAFd0CXpCWqBheZDI5FcybiEuomVT64>

After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- How is a mindset different from a process?
- Why do we need design thinking?
- What does entrepreneurship mean to you? Who do you think is a successful entrepreneur?
- Why is it important for design to be user-centered?

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

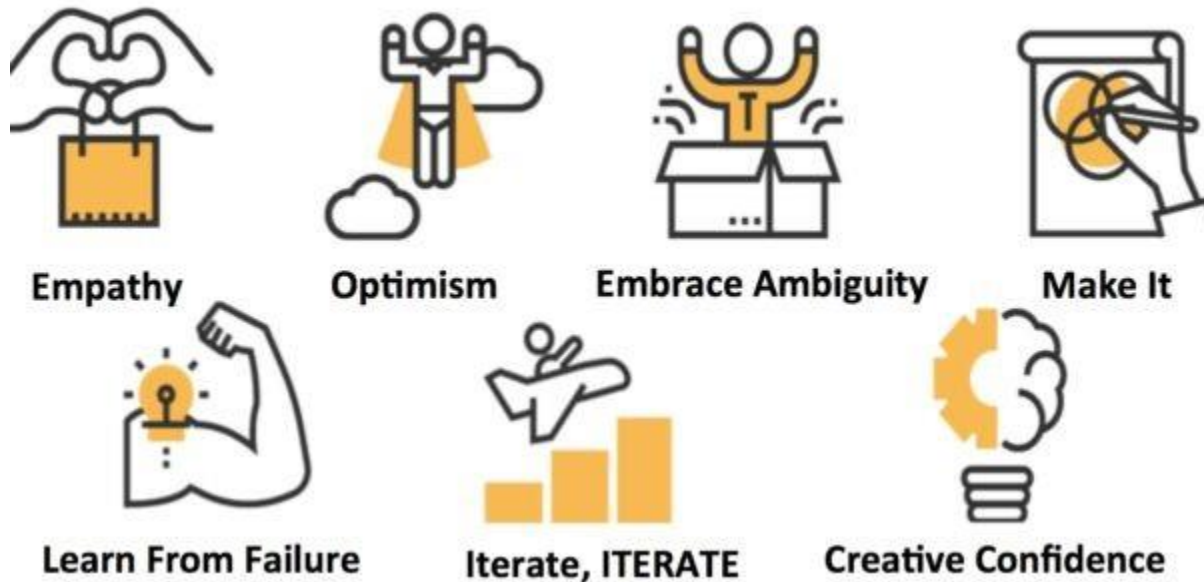


- Design Thinking Mindsets

30 minutes | Presentation

Presentation Slides:

https://drive.google.com/drive/folders/118WbHGLzV97d31-F7ipQzVMi8oz_VynV?usp=sharing



Source: <https://www.innovationtraining.org/design-thinking-mindsets/>

Discuss the mindsets that empower innovation, with examples and applications of each case.

- The Nature of Entrepreneurship

30 minutes | Video & Group Discussion

VIDEO | How Great Leaders Inspire Action: Simon Sinek

https://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action

Reflection questions for discussion (after screening the video):

- What are the traits of a “good leader”?
- What traits do you think every successful entrepreneur must have? (Connect to the LRI Assessment)
- How would you define “success”? Is it only monetary?
- Does starting with WHY (defining purpose) change how you may approach a problem?

MODULE A

Introduction to Design Thinking Mindsets

| CREATIVE THINKING STRATEGIES



A.3: CREATIVE THINKING STRATEGIES

- Recap

10 minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- The 6 Thinking Hats

50 minutes | Presentation & Group Activities

Presentation Slides for A.3.2 - A.3.5:

https://drive.google.com/drive/folders/1c_BBU4-dPYRABsG4XJ7H1ppchBwRt9gJ?usp=sharing

Presenter Notes:

<https://drive.google.com/file/d/1oQ1VibTttdo7ArPbjxYkLwvGkthYr-gw/view?usp=sharing>

Identify an SDG (Sustainable Development Goal) for the exercise. Edward De Bono approach - apply the 6 Thinking Hats to the chosen issue. *Participants to be grouped into teams of 6 for this exercise.*



Source: <https://mgrush.com/blog/debono-six-thinking-hats/>

- Problem Finding - How Might We?

15 minutes | Group Exercise

- The Round Robin Exercise

15 minutes | Group Exercise

- Opposite Thinking

15 minutes | Group Exercise



MODULE B

Design Thinking Methodology

| THE 5 STAGES OF THE DESIGN THINKING PROCESS



B.1: THE 5 STAGES OF THE DESIGN THINKING PROCESS

- Introduction

10minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Critical Reading & Reflection

30minutes | Individual Activity

Participants are instructed to read the following article:

Design Thinking - A Manual for Innovation

https://drive.google.com/file/d/1_TZe12FxrUzq73yZ6V9cjinYpkY46ysi/view?usp=sharing

Worksheet:

<https://drive.google.com/file/d/1wojUcyV9kH8t1kMzaWVph6g85kxv8q7b/view?usp=sharing>

After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- What are the 5 stages of the Design Thinking process?
- Is it a linear process? How is this process different from a formula or a set of instructions?

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

- The 5-Stage Process

45 minutes | Presentation & Activities

Presentation Slides: <https://drive.google.com/open?id=1RFu6eqxibNi0dUVKklpSfStrfolxl25D>

Presenter Notes: <https://drive.google.com/file/d/1nRL7l5nETDWMUovVgVjOEIpTnTgLfPYm/>

- Video - Conclusion

10 minutes

VIDEO | Noah Ullmann - Design Thinking is not just for Designers!

<https://www.youtube.com/watch?v=RbmsgGioFGI#action=share>



MODULE B

Design Thinking Methodology

| IDEATION TOOLS & EXERCISES



B.2: IDEATION TOOLS & EXERCISES

- Recap

10 minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Activity - How Do I Make Chai?

15 minutes | Individual Activity

Materials: One sheet of paper (A4 size) per participant.

Participants are asked to **draw the process** of making a cup of tea. Facilitators are not required to provide any further instructions.

- Video - Systems Thinking

20 minutes | Group Discussion

This video is in continuation to the previous exercise.

VIDEO | Tom Wujec - Tell Me How To Make Toast

https://www.youtube.com/watch?v=vS_b7cJn2A#action=share

Important Aspects To Be Discussed:

- Drawings: Links & Nodes
- Post-its: Iteration
- Group work: Synthesis

- The Wallet Challenge

60 minutes | Team Activity - Pairs

Presentation Slides: To be displayed to the participants

<https://drive.google.com/file/d/1au0J8Rzcs24bjFbPjdEMMLmEWSKUytSt/view?usp=sharing>

Facilitator's Notes:

https://drive.google.com/file/d/171ByNHFxziVzKvjYeEu2OKwoSVP_74Hs/view?usp=sharing

Participants may be asked to carry scrap material from home, and their own stationery. *Do not inform participants about the theme of challenge prior to the session.*



Please make sure that the materials listed below are provided to all participants in the classroom. These materials may be laid out on a table in the corner of the room for participants to use while building their prototypes.

Materials to be made available for the prototyping segment of the wallet challenge:

- Newspaper sheets
- Ice cream sticks
- Tape
- Glue
- Scissors
- Colored papers
- Pens and Markers
- String/thread

Facilitator's resource - further reading:

<https://dschool-old.stanford.edu/sandbox/groups/designresources/wiki/4dbb2/attachments/d5c91/Wallet%20Facilitators%20Guide2012.pdf?sessionID=8af88fee76ecd1fb7879c915073461486c425622>



MODULE B

Design Thinking Methodology

| DESIGN CHALLENGE THEMES



B.3: PERSONAL DESIGN CHALLENGE THEMES

- Recap

05 minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Critical Reading & Reflection

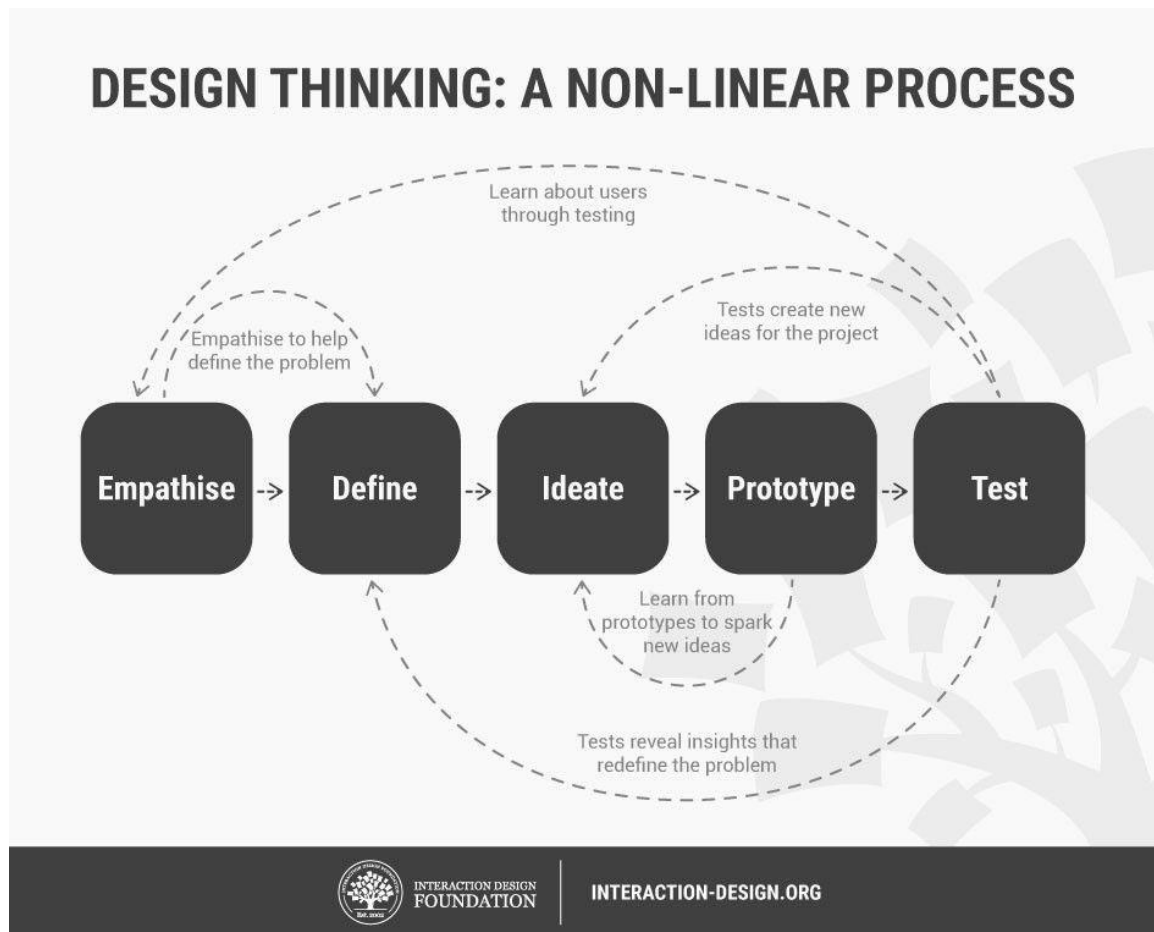
20minutes | Individual Activity

Participants are instructed to read the following article before moving on to framing their individual design challenge. Pay special attention to the focus on the *non-linear nature* of the Design Thinking process.

There are no questions to be answered for this reading.

What is Design Thinking and Why is it so Popular?

https://drive.google.com/open?id=1CJ5Xg3HSxDWYrb6YFAnbfiHu_yr-VZkh



- Video

15 minutes | Group Discussion

Reflection questions *before* watching the video - to be discussed as a group with the facilitator moderating the discussion.

- Do you think you are creative? How do you define creativity?
- What is the most important thing in your life? What issue(s) do you care about the most?
- Have you ever thought about how you would solve those issues?

VIDEO | David Kelley - How to Build your Creative Confidence

<https://www.youtube.com/watch?v=16p9YRF0l-g#action=share>

- Framing the Design Challenge

70 minutes | Group Activity

Discuss the following videos watched previously and identify connections:

- Start With Why
- How to make toast
- Regaining Your Creative Confidence

Presentation Slides:

https://drive.google.com/file/d/1wsZbofh7Ohx3T8SPUFNZVI96aS_awVZ3/view?usp=sharing

Presenter Notes:

https://drive.google.com/file/d/1jDbb0BjkFPv_ZB0FO3AYK4ZgCn-wM9qo/view?usp=sharing

Important Note to Facilitators: Please feel free to connect the broad themes to your respective engineering disciplines and encourage students to identify needs and problems related to the subjects they are studying. The aim is to be able to draw connections between various fields and develop creative solutions to problems.

Outcomes at the end of the exercise

- Individual mind-mapping exercise.
- Group mind-maps based on similarities.
- Create groups for the Design Challenge based on the collective HMW exercise. **Ask each group to choose a name for themselves.**
- Each group must come up with a **clear HMW question** and **proposed solution** by the end of this module. Please use the creative thinking strategies covered in the previous modules to facilitate this exercise.



MODULE C

Storytelling & Tools for Innovation

| ANALYSIS & DRAWING INFERENCES - USER RESEARCH



C.1: ANALYSIS & DRAWING INFERENCES - USER RESEARCH

- Introduction

10minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Critical Reading & Reflection

20 minutes | Individual Activity

Participants are instructed to read the following article:

Should User Research Be A Part Of Your Design Process?

https://drive.google.com/file/d/1i1tpSKSy_vNDP6AgD-ZXzVN8E91A3S-S/view?usp=sharing

Worksheet (questions):

https://drive.google.com/file/d/11GJk_LrZ_tXtfOc5nD_E43YkXjxVldQC/view?usp=sharing

After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- What is user research?
- What are the possible reasons for conducting user research?
- In your opinion, is user research important or is it a step that can be skipped? Why?
- Analyze whether your favourite company uses user research to develop its products. Give examples to support your response.

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

- Exercise - Persona Creation & User Research

45 minutes | Presentation & Activities

Each group is required to create at least 3 different personas for their respective projects. **One persona may be created during this session.** They are required to work on the remaining personas with their teams over the course of the week, and have them ready before the next session.

Materials required:

- A4 sheets



- Old newspapers (to tear out photographs for the persona)
- Post-its
- Pens and Markers

Presentation Slides: <https://drive.google.com/open?id=1JY1nE6J1-J7EdOukq7RZDs3sLrxmqaeo>

Presenter Notes: <https://drive.google.com/open?id=1GzYYjhygKsAtJKbUZBu438JnfEQwlg>



MODULE C

Storytelling & Tools for Innovation

| EMPATHISE: UNDERSTAND USERS - EMPATHY MAPS



C.2: EMPATHISE: UNDERSTAND USERS - EMPATHY MAPS

- Recap

10minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Critical Reading & Reflection

30minutes | Individual Activity

Participants are instructed to read the following article:

Stage 1 in the Design Thinking Process: Empathise with your Users

https://drive.google.com/file/d/1P8Op4Tx2molQvHir_uq2Nssl6gNU9RvF/view?usp=sharing

Worksheet (questions):

https://drive.google.com/file/d/1-OwjtxGnq9_ew9BKgbFFefFJ172820T3/view?usp=sharing

After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- What do you understand by the term “empathy”? How is it different from sympathy?
- Why is it important to conduct interviews with empathy?
- How is the beginner’s mindset useful?
- List ways/methods of using empathy

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

- Empathy Mapping

45 minutes | Activity

Each group is required to create empathy maps for their 3 different personas developed in the previous module. **One empathy map may be created during this session.** They are required to work on the remaining empathy maps with their teams over the course of the week, and have them ready before the next session.

Materials required:

- A1-sized Chart Paper
- Post-its



- Pens and Markers
- **Printable Empathy Map Template:**
https://drive.google.com/file/d/1R_OTaxCCIfBljtKjuzu-eaL3Ai6mqxmi/view?usp=sharing

Presentation Slides: <https://drive.google.com/open?id=1ONu3qhuBKsQiplk0cHwRjZpGwllL53XP>

Presenter Notes: https://drive.google.com/open?id=1HRK_0Vv6sv1zBrelbgi7o6J5xnzVjbb6



MODULE C

Storytelling & Tools for Innovation

| STEP INTO USERS' SHOES - CUSTOMER JOURNEY MAPS



C.3: STEP INTO USERS' SHOES - CUSTOMER JOURNEY MAPS

- Introduction

10minutes | Group Discussion

Previous module recap. Share insights from the reading & reflection exercises.

- Critical Reading & Reflection

30minutes | Individual Activity

Participants are instructed to read the following article. *Please ensure that this is printed in color - the photographs must be clearly visible.*

How A Customer Journey Map Can Help You Improve User Experience

<https://drive.google.com/file/d/1pKO2ql7N3Wka73c3T1nLVluCODGIDN04/view?usp=sharing>

Worksheet (questions):

<https://drive.google.com/file/d/1KvhT26V9WftOWI84p0OmXlummy8f11iEX/view?usp=sharing>

After reading the article, participants are asked to write down their individual responses to the following questions in the worksheet:

- What is a user persona? Why must we avoid stereotypes while creating one?
- What is a touchpoint on a Customer Journey Map (CJM)?
- Draw a quick CJM for your experience when you go to the vegetable vendor to buy 1kg of onions: Define the important touchpoints in this experience. Define 2 user personas for your CJM - the buyer and the seller.

Note: The critical readings have been shared in the form of a printable worksheet. Kindly ensure that every participant is given a copy of the reading. Questions are to be answered in the handout. All handouts are to be filed in a folder for the final assessment and documentation.

- Customer Journey Mapping

45 minutes | Presentation & Activities

Each group is required to create customer journey maps for their 3 different personas developed in the previous modules. **One CJM may be created during this session.** They are required to work on the remaining maps with their teams over the course of the week, and have them ready before the next session.



Materials required:

- A1-sized Chart Paper
- Post-its
- Pens and Markers
- **Printable Customer Journey Map Template:**
https://drive.google.com/file/d/10crN6yDIA7gz_ZHg1TRkQKJ3mdkgodQB/view?usp=sharing

Presentation Slides: <https://drive.google.com/open?id=1t2CM1BWkFikzl-NulwzNjSpmjL6KPOyh>

Presenter Notes: <https://drive.google.com/open?id=1iBWIW4qoVCZprhe8BMOY-ZckQDal80Hh>



MODULE D

The Design Challenge

D.1 | THE ART OF THE PITCH



| THE ART OF THE PITCH

- Introduction

By this stage, students should be familiar with the following topics (covered in the previous modules):

- The 5 stages of the Design Thinking process → Empathise, Define, Ideate, Prototype, Test. This is **not** a linear process.
- Applying the Thinking Hats to problems.
- Framing HMW (How Might We) questions.
- Tools: User Personas, Empathy Maps, Customer Journey Maps.

- The Art of the Pitch

30minutes | Presentation

In this section, participants are introduced to the Pitch. This is a key aspect of entrepreneurship - the ability to articulate an idea and convey it to an audience is an essential skill.

Presentation Slides: <https://drive.google.com/open?id=12Nj1paj3SzkTjyivVkSa94sHnB7wFk0M>

Presenter Notes: <https://drive.google.com/open?id=1cmVv91OAW5EbhSxrFqCp3aGPQ1ajIElW>

- Develop & Present a 3-Minute Pitch

60 minutes | Activity

Participants are given time to develop a 3-minute pitch. Each team must develop a message map and 130-character headline for their proposed solution. (*please refer to the slides*)

- Sample Pitches | Recommended Videos

Watching other entrepreneurs pitch is highly recommended. Please share these videos with the participants so that they may observe the skills and techniques needed to develop a good pitch. They may watch the videos at home.

Note to Facilitators: The facilitator *may choose* to play any one video during the session depending on time constraints. Kindly watch the videos before the session so that you are familiar with the content before sharing it with the students.



- Getting Behind the Perfect Investor Pitch: <https://www.youtube.com/watch?v=n6x-lcNGBms>
- How to do a 60-second startup pitch: <https://www.youtube.com/watch?v=7SM8kVtYrpg>
- How to give the perfect pitch - with TedX speech coach David Beckett - Young Creators Summit 2016: <https://www.youtube.com/watch?v=Njh3rKoGKBo>
- Elevator Pitch Examples with Chris Westfall: [youtube.com/watch?v=98WIZJqscVk](https://www.youtube.com/watch?v=98WIZJqscVk)
- Hoverr (India) Pitching at Echelon 2014 Top 10 Launchpad: https://www.youtube.com/watch?v=KubZQUc_qiQ
- The Pitch - Elevator Round #3: <https://www.youtube.com/watch?v=I5HlyqZOayA>
- Shark Tank - Show on Netflix
- How Pitching Investors is Different Than Pitching Customers - Michael Seibel: <https://www.youtube.com/watch?v=pQnOBHNKlgs>



MODULE D

The Design Challenge

| PROCESS REVIEW



| PROCESS REVIEW

- Introduction

By this stage, students should be familiar with the following topics (covered in the previous modules):

- The 5 stages of the Design Thinking process → Empathise, Define, Ideate, Prototype, Test. This is **not** a linear process.
- Applying the Thinking Hats to problems.
- Framing HMW (How Might We) questions.
- Tools: User Personas, Empathy Maps, Customer Journey Maps.
- Explaining ideas in a clear and concise manner.
- Pitching ideas to an audience.

- Student Presentations

90 - 120 minutes | Peer Reviews

- Divide the class into 4 large groups. (Ensure that students stay with their respective teams)
- In each group, one team starts presenting their work in the following format:
 - Problem Area
 - Problem Statement/HMW Question
 - Insights - Personas
 - Insights - Empathy Maps
 - Insights - Customer Journey Maps
 - 30-second Elevator Pitch of their solution
- Other teams in the group assess the team on the basis of
 - Depth of research
 - Clarity of process
 - Communication
 - Feasibility of proposed solutions
 - Uniqueness of solutions

The facilitator must walk around the class while the peer reviews are in process. Please ensure that the discussions are productive. Intervene to guide the process where required. Kindly make notes of any gaps or observations and share feedback with the students at the end of the session.



MODULE D

The Design Challenge

| TESTING, DOCUMENTATION & THE PITCH



| TESTING, DOCUMENTATION & THE PITCH

This is the final session of the course. By this stage, participants must be ready with the following materials:

- Research materials and documentation of their process (interview notes, sketches, etc.)
- A clearly defined problem statement
- User Personas
- Empathy Maps
- Customer Journey Maps
- A proposed solution to the problem statement that has been developed using the mindsets, methodologies, and tools covered in the previous modules.
- A prototype of their solution.

Final Deliverable: The participants are to make their final 20-minute presentation using the **10/20/30 rule** (as covered in D.3). Participants are to be assessed on the completeness of their presentation and the quality of their ideas. They are to upload their PPTs to a common folder on Google Drive - this link is to be shared with 21ID for assessment and feedback.



BOOK LIST

Recommended Reading List



PRIMARY REFERENCES:

Book

Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School - Idris Mootee. ₹ 734

https://www.amazon.in/s?k=idris+mootee&ref=nb_sb_noss_2

Glossary of Design Thinking Terminology used in the Course

A - F : <https://uxdict.io/design-thinking-glossary-a-f-4838feec2f82>

G - P : <https://uxdict.io/design-thinking-glossary-g-p-e8eb4c0e960d>

Q - Z : <https://uxdict.io/design-thinking-glossary-q-z-bd41435770db>

REFERENCE BOOKS:

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<https://www.amazon.in/Zero-One-Start-Build-Future/dp/0753555190/>
2. The Lean Startup: How Constant Innovation Creates Radically Successful Businesses ₹ 410_
<https://www.amazon.in/Lean-Startup-Innovation-Successful-Businesses/dp/0670921602/>
3. Start With Why: How Great Leaders Inspire Everyone To Take Action ₹ 273_
<https://www.amazon.in/Start-Why-Leaders-Inspire-Everyone/dp/0241958229/>
4. The \$100 Startup: Fire Your Boss, Do What You Love and Work Better To Live More ₹ 209
<https://www.amazon.in/100-Startup-Fire-Your-Better/dp/1447286316/>
5. Hooked: How to Build Habit-Forming Products ₹ 368_
<https://www.amazon.in/Hooked-How-Build-Habit-Forming-Products/dp/0241184835/>
6. Elon Musk: How the Billionaire CEO of SpaceX and Tesla is Shaping Our Future ₹ 420_
<https://www.amazon.in/Elon-Musk-Billionaire-SpaceX-Shaping/dp/0753555638/>
7. The Power of Habit: Why We Do What We Do, and How to Change ₹ 308_
<https://www.amazon.in/Power-Habit-Why-What-Change/dp/1847946240/>
8. The Subtle Art of Not Giving a F*ck ₹ 264_
<https://www.amazon.in/Subtle-Art-Not-Giving/dp/0062641549/>
9. The 80/20 Principle: The Secret to Achieving More with Less ₹ 304_
<https://www.amazon.in/80-20-Principle-Secret-Achieving/dp/0385491743/>
10. Outliers: The Story of Success ₹ 303
<https://www.amazon.in/Outliers-Story-Success-Malcolm-Gladwell/dp/014103625>
11. Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant ₹ 742
<https://www.amazon.in/Blue-Ocean-Strategy-Uncontested-Competition/dp/1625274491>
12. Steve Jobs ₹ 316
<https://www.amazon.in/Steve-Jobs-Walter-Isaacson/dp/034914043X/>



13. Entrepreneur 5 P.M. to 9 A.M.: Launching a Profitable Start-Up without Quitting Your Job ₹ 193 <https://www.amazon.in/Entrepreneur-P-M-M-Launching-Profitable/dp/8129123932/>
14. Blitzscaling: The Lightning-Fast Path to Building Massively ₹ 372_ <https://www.amazon.in/Blitzscaling-Lightning-Fast-Path-Building-Massively/dp/0008303630/>
15. Purple Cow: Transform Your Business by Being Remarkable ₹ 307_ <https://www.amazon.in/Purple-Cow-Transform-Business-Remarkable/dp/014101640X/>
16. Sapiens: A Brief History of Humankind: Amazon.in: Yuval Noah Harari ₹ 292_ <https://www.amazon.in/Sapiens-Humankind-Yuval-Noah-Harari/dp/0099590085/>
17. Antifragile: Things that Gain from Disorder ₹ 304_ <https://www.amazon.in/Antifragile-Things-that-Gain-Disorder/dp/0141038225/>
18. Grinding It Out: The Making of McDonald's ₹ 227_ <https://www.amazon.in/Grinding-Out-McDonalds-Ray-Kroc/dp/1250127505/>
19. Creative Confidence: Unleashing the Creative Potential Within Us All ₹ 247_ <https://www.amazon.in/Creative-Confidence-Unleashing-Potential-Within/dp/0007592515/>
20. The Art of Innovation (Updated) ₹ 399 <https://www.amazon.in/Art-Innovation-Updated-42446/dp/1781256144/>
21. Design Thinking for Strategic Innovation: What They Can't Teach You at Business or Design School ₹ 650 <https://www.amazon.in/Design-Thinking-Strategic-Innovation-Business/dp/8126572698/>
22. Sprint ₹ 403 <https://www.amazon.in/Sprint-Jake-Knapp/dp/0593076117/>
23. The Design of Everyday Things ₹ 678 <https://www.amazon.in/Design-Everyday-Things-Don-Norman/dp/0465050654/>
24. Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability (3rd Edition) ₹ 450 <https://www.amazon.in/Dont-Make-Think-Revisited-Usability/dp/9332542864/>
25. Design as Art (Penguin Modern Classics) ₹ 399_ <https://www.amazon.in/Design-Art-Penguin-Modern-Classics/dp/0141035811/>
26. Hooked: How to Build Habit-Forming Products ₹ 368_ <https://www.amazon.in/Hooked-How-Build-Habit-Forming-Products/dp/0241184835/>
27. Emotional Design ₹ 820 <https://www.amazon.in/Emotional-Design-Don-Norman/dp/0465051367/>
28. Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers ₹ 549_ <https://www.amazon.in/Gamestorming-Playbook-Innovators-Rulebreakers-Changemakers/dp/9350230666/>
29. Value Proposition Design: How to Create Products and Services Customers Want ₹ 531_ <https://www.amazon.in/Value-Proposition-Design-Products-Customers/dp/8126553073/>
30. The Ten Faces of Innovation ₹ 359 <https://www.amazon.in/Ten-Faces-Innovation-Tom-Kelley/dp/1781256152/>
31. The Art Of Creative Thinking ₹ 299 <https://www.amazon.in/Art-Creative-Thinking-Rod-Judkins/dp/1444794485/>
32. Lateral Thinking: A Textbook of Creativity ₹ 299 <https://www.amazon.in/Lateral-Thinking-Creativity-Edward-Bono/dp/0241257549/>



33. This is Service Design Thinking: Basics, Tools, Cases ₹ 2234
<https://www.amazon.in/This-Service-Design-Thinking-Basics/dp/1118156307/>
34. The Design of Business ₹ 1249
<https://www.amazon.in/Design-Business-Roger-L-Martin/dp/1422177807/>
35. Innovator's Dilemma: When New Technologies Cause Great Firms to Fail (Management of Innovation and Change) ₹ 818
<https://www.amazon.in/Innovators-Dilemma-Technologies-Management-Innovation/dp/142219602X/>
36. FRUGAL INNOVATION: HOW TO DO BETTER WITH LESS ₹ 400
<https://www.amazon.in/FRUGAL-INNOVATION-HOW-BETTER-LESS/dp/9350099853/>
37. The Design Thinking Playbook: Mindful Digital Transformation of Teams, Products, Services, Businesses, and Ecosystems ₹ 1998
<https://www.amazon.in/Design-Thinking-Playbook-Transformation-Businesses/dp/1119467470/>
38. Thinking, Fast and Slow (Penguin Press Non-Fiction) ₹ 309
<https://www.amazon.in/Thinking-Fast-Penguin-Press-Non-Fiction/dp/0141033576/>
39. Nudge: Improving Decisions About Health, Wealth and Happiness Paperback ₹ 300
<https://www.amazon.in/Nudge-Improving-Decisions-Health-Happiness/>
40. Creating Innovators: The Making of Young People Who Will Change the World ₹ 475
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41. Essays of Warren Buffett ₹ 650
https://www.amazon.in/Essays-Warren-Buffett-Lawrence-Cunningham/dp/8126557192/ref=sr_1_1_sspa?crid=31EYPGJAJ81XE&keywords=the+essays+of+warren+buffet&qid=1560666276&s=gateway&sprefix=the+essays+of+%2Caps%2C304&sr=8-1-spons&psc=1
42. Wired to Care: How Companies Prosper When They Create Widespread Empathy ₹ 2022
https://www.amazon.in/Wired-Care-Companies-Prosper-Widespread-ebook/dp/B001QL5MYQ/ref=sr_1_1?keywords=wired+to+care&qid=1560665995&s=gateway&sr=8-1
43. The Achievement Habit: Stop Wishing, Start Doing and Take Command of your Life ₹ 916
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44. Exposing the Magic of Design: A Practitioner's Guide to the Methods and Theory of Synthesis (Human Technology Interaction Series) ₹ 2427
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47. Insight Out: Get Ideas Out of Your Head and Into the World eBook: Tina Seelig ₹ 2035



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48. The Designful Company: How to build a culture of nonstop innovation (Voices That Matter) ₹ 4053
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52. Designing for Growth - A Design Thinking Tool Kit for Managers (Columbia Business School Publishing) ₹ 1894
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