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Teach-BEASTs

Teach to BE Aware STudents

Training support booklet

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Materials Accompanying TEACH-BE(A)STs Training

PERSONAL INTRODUCTION

To foster a collaborative and informative environment, we will begin with a brief introductory session. Each of you is kindly requested to introduce himself to the group, following the guidelines:

- ***Name:*** *Please start with your full name, ensuring clarity so everyone can address you properly throughout our discussions.*
- ***Institution:*** *Mention the institution you are currently affiliated with. This helps in understanding the diverse academic backgrounds present here today.*
- ***Discipline:*** *Briefly describe your primary discipline or field of study.*

MEET AND GREET

Find 3 things in common with 3 people in the room!

BINGO

Complete the Bingo sheet

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WORKSHOP PREREQUISITES

To ensure a productive and enriching experience during sessions, participants should come prepared with the following materials:

Course(es) Syllabus *for reference. This will assist in delving into the specifics of teaching objectives and methods.*

Slide Decks for Classes*. These materials will allow for the implementation of our approach into materials so that they are ready to use.*

By coming prepared with these materials, participants will be able to actively engage in discussions and activities tailored to enhance your teaching approach.

WORKSHOP OBJECTIVES

- Learn the DT process, methodology and tools in order to teach professors of STEM courses how to bring the DT approach into STEM courses.
- Learn the “Teachers process” and the “Student experience”.
- Understand how to use the material: *DT Meets STEM Manual, Miro, Slide Deck*
- Test whether the material generated for the objectives of the DT in STEM is easy to understand and use. Identify improvements in the material provided.
- Generate examples of the use of the manual.

EXPECTED OUTPUTS

After the 3 days workshop you have created the first draft of the following:

1. **Updated Syllabus** for your course, incorporating the CBL through DT. How will you allocate time to CBL and DT in your course?

2. **Material for class**: Slides that you will use in class

3. **Handouts for students**: Material that you will give to students in the course (e.g. Miro, Missions)

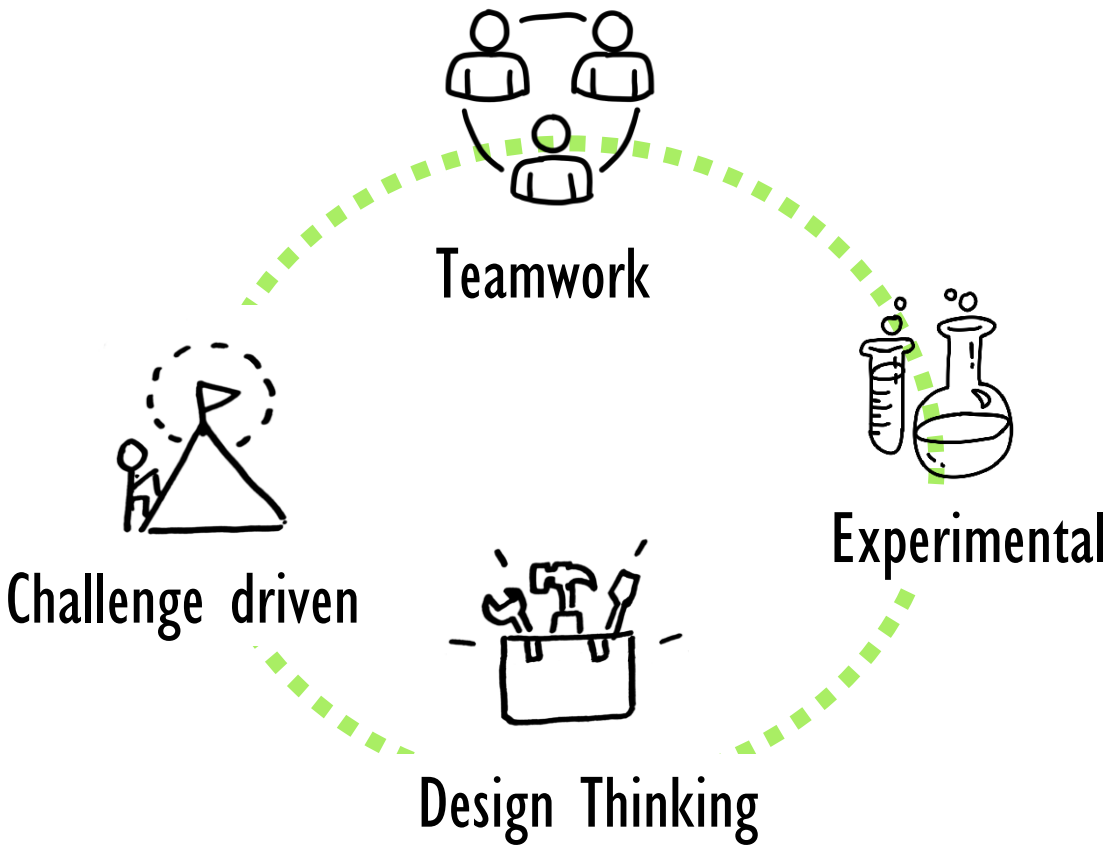
4. **Teams**: What types of teams will you create?

5. **Challenge**: What type of challenge suits the process and course?

6. **Evaluation**: What type of evaluation best suits the course?

Use the booklet for your notes. As part of our learning, we would like to make a copy of your notes in the booklet.

WORKSHOP DYNAMIC



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WORKSHOP SCHEDULE

Day 1

Session 1: Mindset, process and value of Design Thinking in STEM courses

Session 2: Tools for designing projects and project team collaboration

Session 3 & 4 : Tools for exploring and defining the problem space

Day 2

Session 5 : Tools for creating and testing the solutions

Session 6 & 7: Course Transformation: Syllabus improvement with PBL

Session 8 : Course transformation: Create Supporting slides

Session 9 & 10: Challenge development

Barcelona Design Week – Fusion Point students' projects expo and Voluntary dinner in Barcelona

Day 3

Session 11: Evaluation of PBL courses

Session 12: Course transformation cont.

Session 13: Supporting structure

Session 14: Share & Feedback

Workshop close and feedback

DESIGN THINKING MINDSET AND TOOLS

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OBJECTIVES

- What is Design Thinking?
- Understand the DT process and introduction to basic concepts and tools.
- How can it help STEM students?
- Understand the process, tools and structure
- The basics: Pre, during and after course.

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DT ice breaker

WHAT DO YOU THINK ABOUT DESIGN THINKING?

ADD A QUESTION YOU WANT TO ANSWER

WRITE AN ANALOGY TO DESCRIBE DESIGN THINKING

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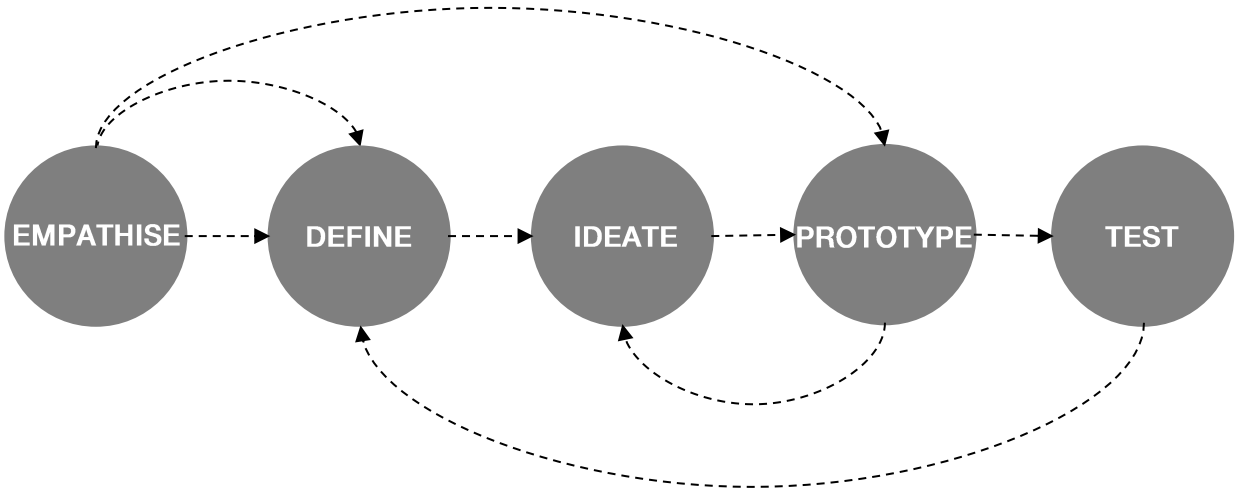
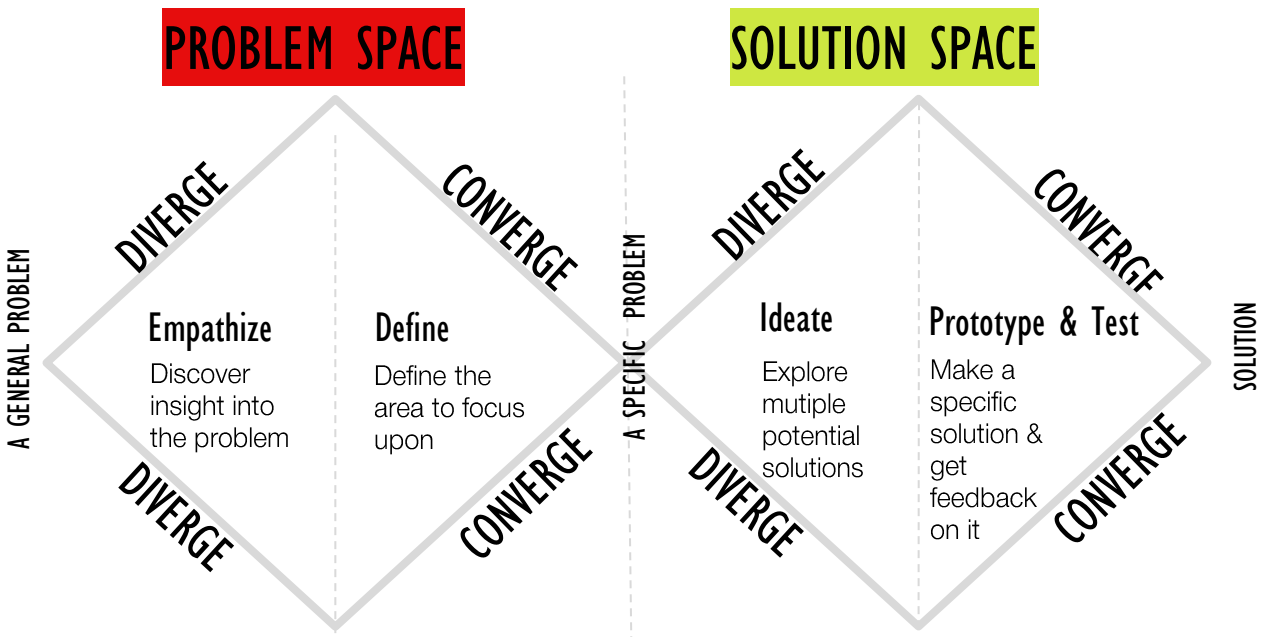
THE PROCESS





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NOTES, DOUBTS, INSIGHTS

THE PROCESS

TOOLS

THE STRUCTURE

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KEY TAKEAWAYS

Design Thinking is a creative, human-centred, iterative approach to problem-solving recognised by academic and industry as a practical and agile process which engages people in generating innovative solutions to complex challenges.

- PROCESS
- TOOLS
- STRUCTURE

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TOOLS FOR PROJECTS and PROJECT TEAM COLLABORATION

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OBJECTIVES

- Understand Project-Based Learning (PBL)
- Clarify the importance of team collaboration
- How to deal with a distributed team
- How to use Teach-BeAst provided Tools
- How to implement DT into your syllabus by using DT Tools and Techniques

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NOTES

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TOOLS FOR STUDENTS

THE MIRO BOARD

TECHNICAL-BASED
COURSES

SCIENCE-BASED
COURSES

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MISSIONS

TECHNICAL-BASED COURSES


1


2


3


4


5


6

SCIENCE-BASED COURSES


0


1


2


3


4


5

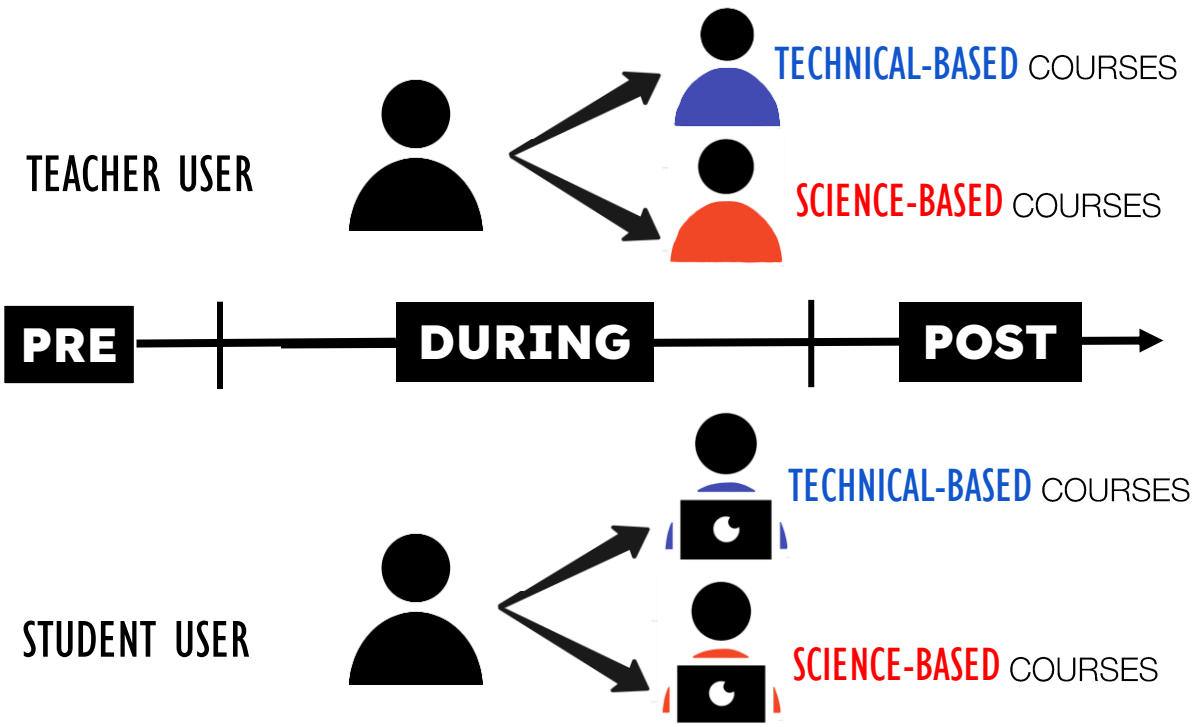

6

KEY TAKEAWAYS

Teaching is a creative design act by nature. You create experiential learning every day!

A great team will find ways to communicate well, regardless of the tools!

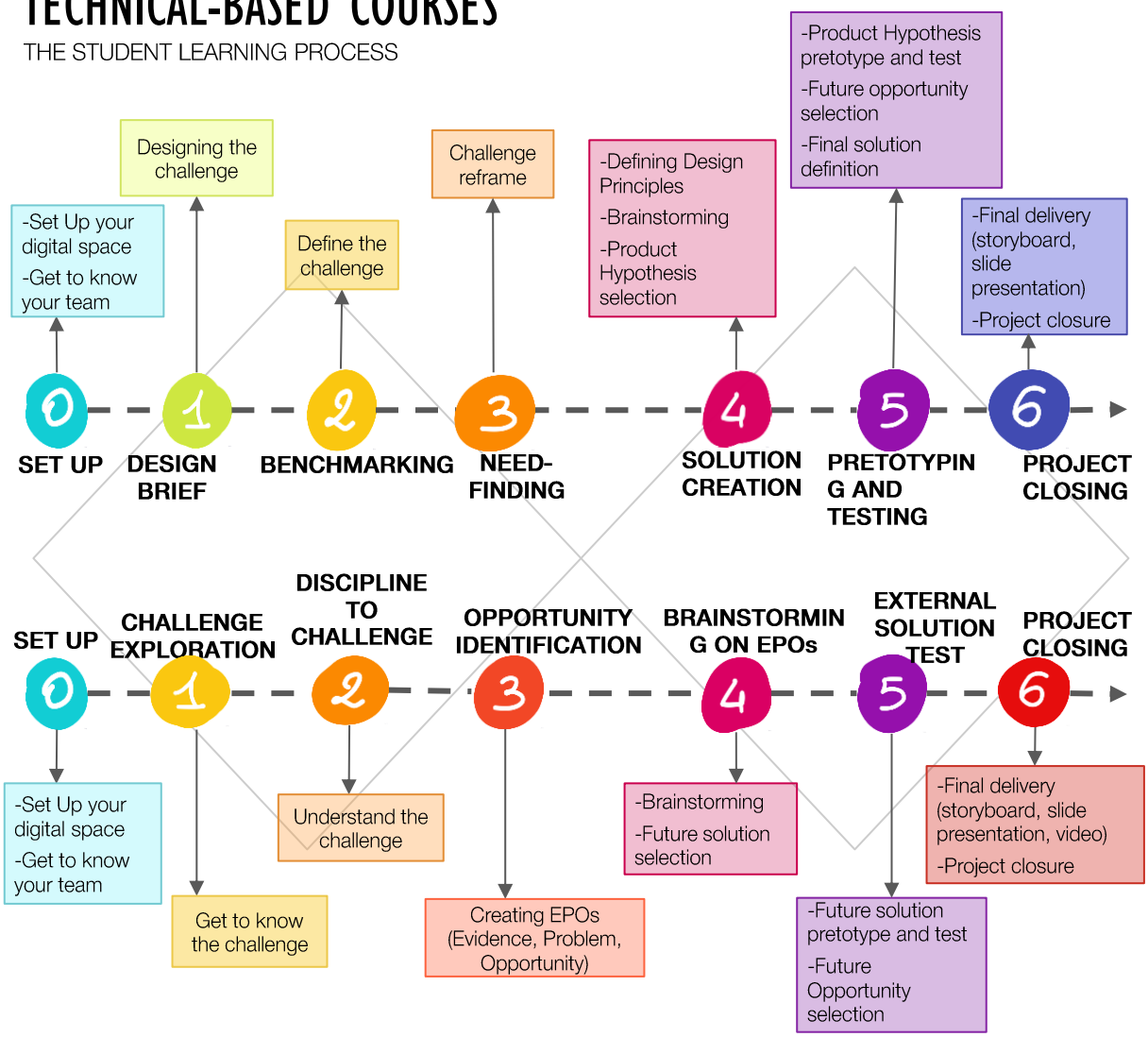
TWO PERSPECTIVES



TWO PROCESSES

TECHNICAL-BASED COURSES

THE STUDENT LEARNING PROCESS



SCIENCE-BASED COURSES

THE STUDENT LEARNING PROCESS

TOOLS - PROBLEM SPACE

TOOL	NOTES

TOOLS – PROBLEM SPACE

TOOL	NOTES

TOOLS – PROBLEM SPACE

TOOL	NOTES

TOOLS - SOLUTION SPACE

TOOL	NOTES

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TOOLS - SOLUTION SPACE

TOOL	NOTES

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TOOLS - SOLUTION SPACE

TOOL	NOTES

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COURSE TRANSFORMATION

SYLLABUS IMPROVEMENT

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SYLLABUS IMPROVEMENT

Work within your group for collaborative drafting.

- Take advantage of this time to either create new sections of your syllabi or revise existing ones.
- The aim is to incorporate the Project-Based Learning (PBL) using Design Thinking tools identified in previous sessions into your course design.

FACILITATOR SUPPORT:

- Facilitators will be available throughout the session, moving around the room to offer individualized feedback and support.
- Feel free to ask for suggestions, clarifications, or assistance in integrating the tools into your syllabi effectively.

SYLLABUS IMPROVEMENT

YOUR OWN SPACE

NOTES - DOUBTS - INSIGHTS

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COURSE TRANSFORMATION

CREATE SUPPORTIVE SLIDES

CREATE SUPPORTIVE SLIDES

Work within your group for collaborative drafting.

- Take advantage of this time to either create new slides or supporting material for your course or revise existing ones.
- The aim is to embed the DT process into your course.

FACILITATOR SUPPORT:

- Facilitators will be available throughout the session, moving around the room to offer individualized feedback and support.
- Feel free to ask for suggestions, clarifications, or assistance in integrating the tools into your syllabi effectively.

CREATE SUPPORTIVE SLIDES

YOUR OWN SPACE

NOTES - DOUBTS - INSIGHTS

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CHALLENGE DEVELOPMENT

OBJECTIVES

- Understand how to create the challenge
- Understand the three phases:
  - Challenge development;
  - Challenge operationalization;
  - Challenge evaluation;
- What to do beyond the challenge identification

CREATE YOUR STEM INNOVATION CHALLENGE

EVALUATION IN PBL COURSES

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OBJECTIVES

- What are the challenges in the evaluation of PBL?
- How can those challenges be overcomed?
- What tools are avaiable in the toolkit?
- What is experiential learning?
- How to evaluate an individual refelction?

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GOALS

- **Compare**: Provide a mark which can be fitted in the current evaluation system.
- **Individual**: Account for individual efforts.
- **Group**: Account for group results.
- **Learn**: Enhance students learning.
- **Skills & Attitude**: Account for skills and attitudes developed.

EVALUATE REFLECTIONS

REFLECTIONS

REFLECTION

REFLECTION

EVALUATION

VARIETY

DEPTH

RELEVANCE

VARIETY

DEPTH

RELEVANCE

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EVALUATE REFLECTIONS

REFLECTIONS

REFLECTION

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EVALUATION

VARIETY

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VARIETY

DEPTH

RELEVANCE

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REFLECT THE EVALUATION

WHAT HAVE I LEARNED FROM THE PREVIOUS EXPERIENCE?

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REFLECT THE EVALUATION

FACTS

FEELINGS

FINDING

FUTURE

KEY TAKEAWAYS

- EVALUATION: group evaluation, peer-to-peer evaluation, individual evaluation
- What does “Experiential Learning” mean?
- Active reviewing:
  - **Facts**: an objective account of what happened;
  - **Feelings**: the emotional reactions to the situation;
  - **Finding**: the concrete learning that you can take away from the situation;
  - **Future**: structuring your learning such that you can use it in the future.

COURSE TRANSFORMATION

EVALUATION

EVALUATION

Work within your group for collaborative drafting.

- Take advantage of this time to create your new evaluation tool. Use the supporting material received in the workshop to easily navigate the changing process.

FACILITATOR SUPPORT:

- Facilitators will be available throughout the session, moving around the room to offer individualized feedback and support.
- Feel free to ask for suggestions, clarifications, or assistance in integrating the tools into your syllabi effectively.

EVALUATION

YOUR OWN SPACE

NOTES - DOUBTS - INSIGHTS

SUPPORTING STRUCTURE RESOURCES AND OPS

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INSIGHTS

INSIGHTS

THANKS FOR PARTICIPATING!

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