



HARIDUS- JA
TEADUSMINISTEERIUM



HARIDUS- JA NOORTEAMET



A Framework for Higher Education Course Design

Dr. Marc Laperrouza, Senior scientist & Lecturer, EPFL

Tallinn & Lausanne, October-December 2025

Course design - 2025 103

Today



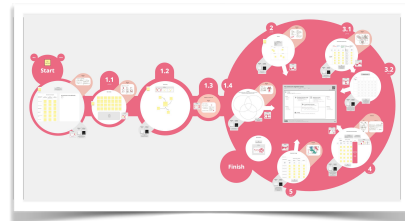
- Debrief on ILOs
- Aligning content and learning outcomes
- Teaching and learning strategy
- Assignment and next time

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Housekeeping



- Digital signature of participants
- Have your own MIRO board open (e.g., board 21)
- Have the general MIRO board open (<https://go.epfl.ch/coursedesign>)



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Key learning on intended learning outcomes

Please complete the following task(s):

- **Reflect** individually on the formulation of the learning outcomes of your course and **write one key learning** in MIRO
- Share an **open question** you may still have regarding ILOs



<https://go.epfl.ch/coursedesign>

5 minutes

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Debrief on ILOs

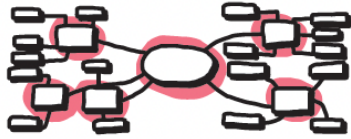


Design
**Alignment between
content and learning
outcomes**



Designing your course in 6 steps

Content-outcomes alignment



1. Identification of key concepts



2. Identification of contextual elements



3. Definition of intended learning outcomes

Cont. obj.	C1	C2	C3
O1	X		X
O2		X	

4. Content-outcomes alignment



5. Choice of teaching & learning strategy



6. Choice of assessment strategy

A matrix to align content and learning outcomes



Content \ Outcomes	Research ethics	Quantitatives methods	Scientific writing
Critically assess the ethical implications of a research project	X		
Demonstrate the principles of essay writing in a scientific report			X
Present research that demonstrates critical thinking, analysis and problem-solving in the form of a poster			
Work in a team to write a state of the art while following the principles of scientific writing			X

Content → Learning outcomes ↓	Constructive alignment	Concept maps	Teaching and learning philosophy	Reflexivity		
Describe the elements and mechanics of the constructive alignment canvas and tools	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Be able to design a course based on its context and your vision of teaching and learning	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Apply a reflexive process to analyze and improve a course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Aligning content and learning outcomes

Go to your MIRO board

1. Fill the table by:

- Putting your learning outcomes (rows)
- Listing the main content elements (columns)

2. Put a cross in the boxes indicating alignment between the content element and the learning outcome



5 minutes



Q&A on alignment



Session #03

Designing effective learning activities

Session #03 learning outcomes

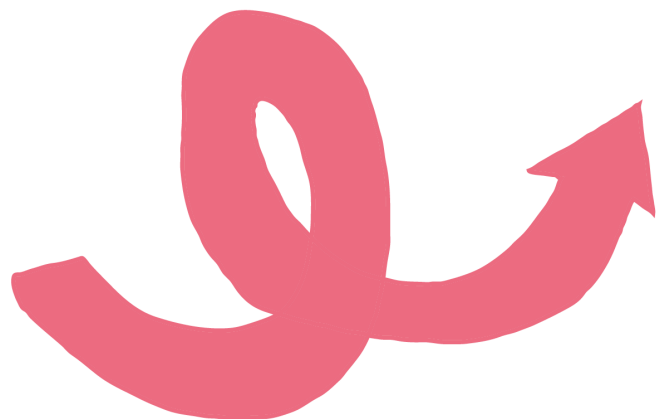


- Define the teaching and learning activities for your course
- Apply the FAIR* model to the design of your T&L activities

* Feedback, Application, Interactivity, Reflexivity

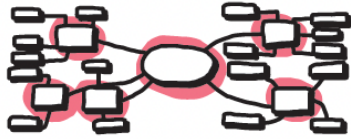
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**Design
Teaching and
learning strategy**



Designing your course in 6 steps

Teaching & learning strategy



1. Identification of key concepts



2. Identification of contextual elements



3. Definition of intended learning outcomes

Cont. Obj.	C1	C2	C3
O1	X		X
O2		X	

4. Content-outcomes alignment



5. Choice of teaching & learning strategy

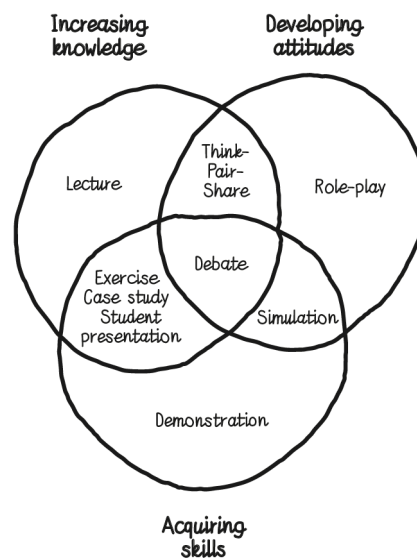


6. Choice of assessment strategy

A strategy that combines activities



- Don't confuse teaching format (lecture, seminar, practical work, etc.) with teaching & learning strategy
- A teaching strategy is made up of teaching & learning **activities**



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Teaching and learning activities

What are your preferred teaching and learning activities? Why?

5 minutes

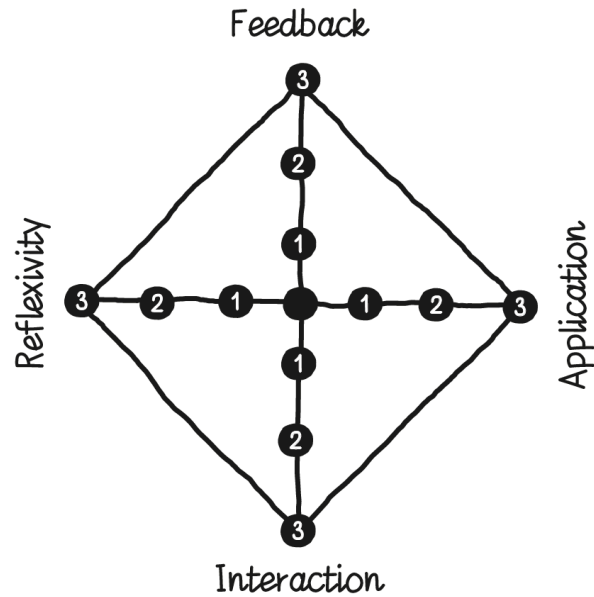


Mini-break

5 minutes



The FAIR model



Learning theories

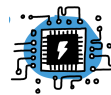
Behaviorism

Feedback



Cognitivism

Application



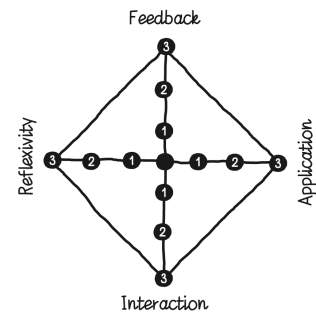
Constructivism

Reflexivity

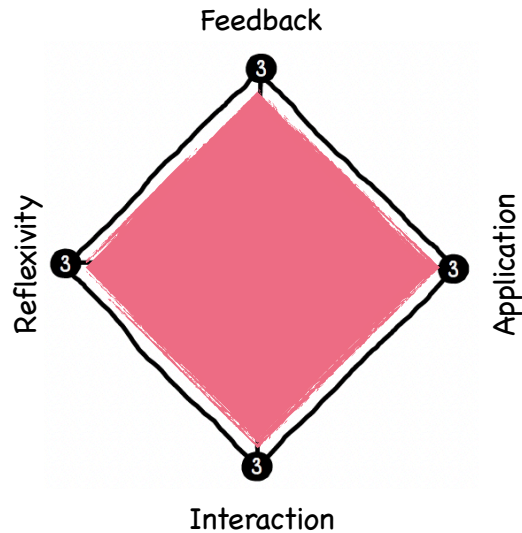


Socio-constructivism

Interaction



Reinforcing learning



Assessing the level of use of the 4 dimensions

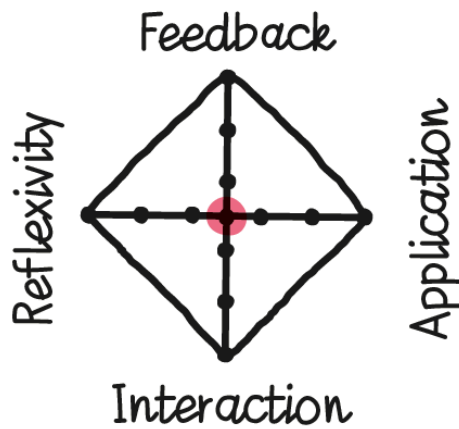


	1	2	3
Feedback	Basically no feedback	Single-source feedback (peer, instructor, or results)	Multiple sources of feedback (peer + instructor + results)
Application	Very few notions used	Certain notions used in a single context	Certain notions used in different contexts
Interaction	Very few interactions	Student/student or instructor/student interactions	Student/student and instructor/student interactions
Reflexivity	Few activities that stimulate reflexivity	Some activities that stimulate reflexivity (activities involving synthesis, comparison, linkage, formalization)	Many activities that stimulate reflexivity (activities involving synthesis, comparison, linkage, formalization)



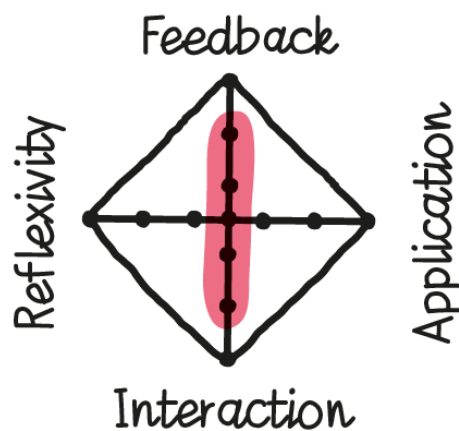
The FAIR model

Mapping the teaching & learning strategy



The FAIR model

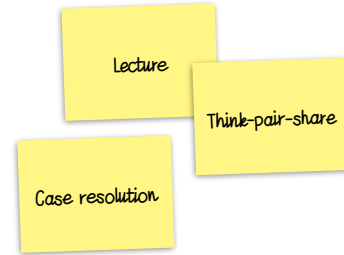
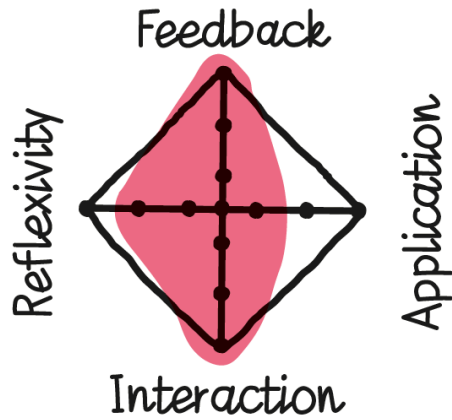
Mapping the teaching & learning strategy





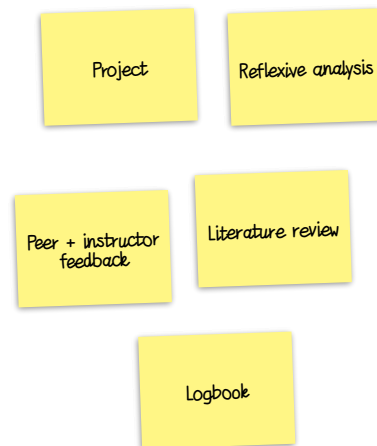
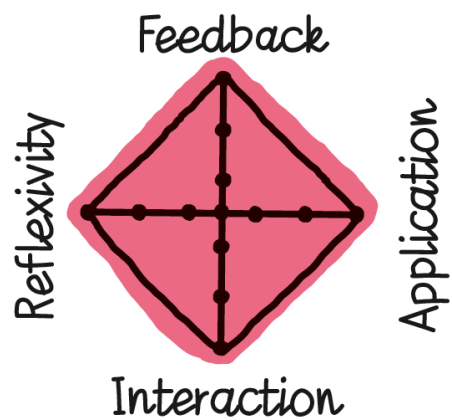
The FAIR model

Mapping the teaching & learning strategy

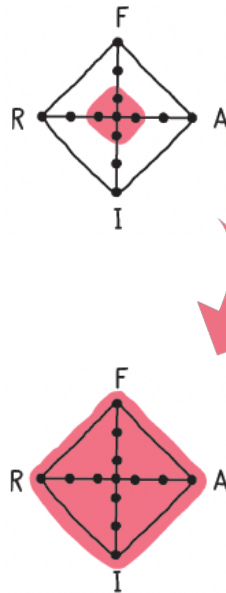


The FAIR model

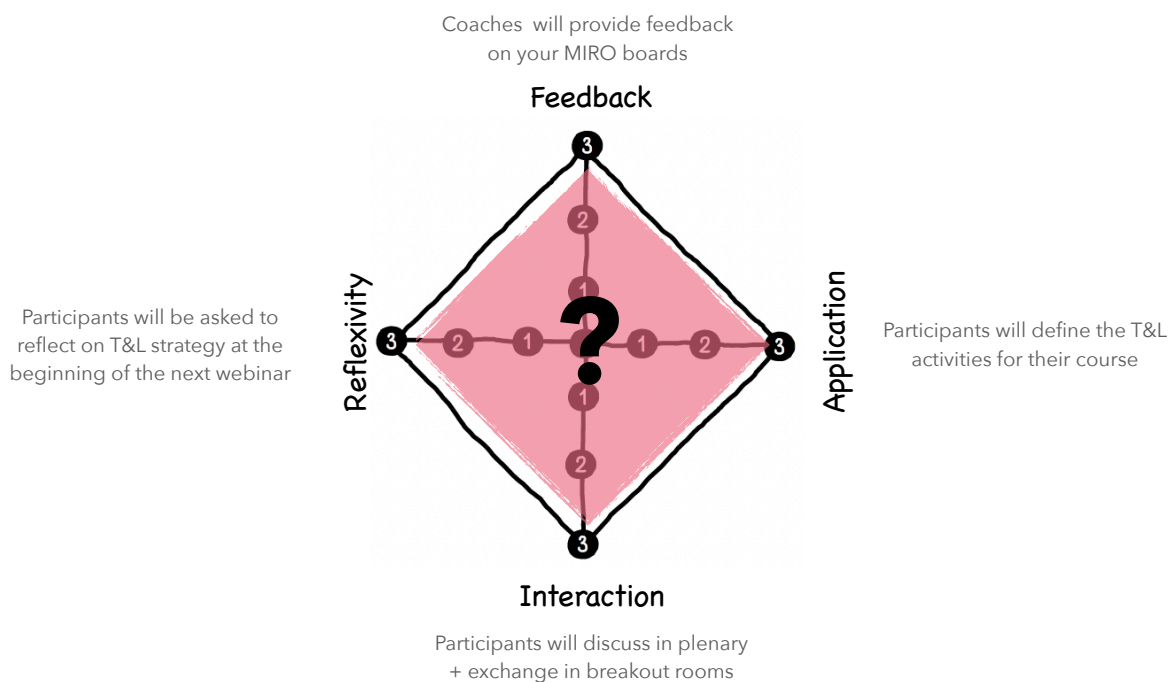
Mapping the teaching & learning strategy



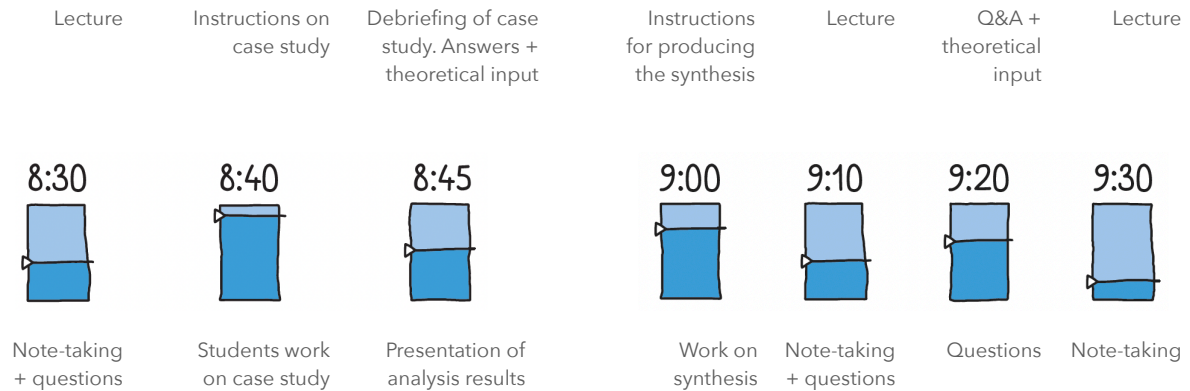
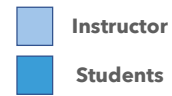
Different learning levels



Reinforcing learning on T&L strategy

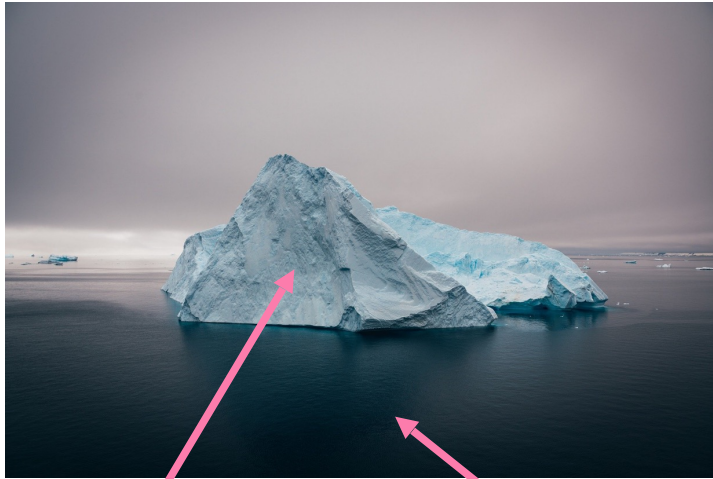


Varying student involvement in class



16:00	End of 2nd session									
14:30	00:10	Welcome and introduction	T&L strategy	#0	ML	Mini-lecture	Zoom + recording	3	103-105	
14:40	00:15	ILO	Debrief on ILOs	#3	All	Plenary discussion/Q&A	MIRO main board	2	106-107	
14:55	00:05	Alignment between content & ILOs	Constructive alignment	#3	ML	Mini-lecture		4	108-111	
15:00	00:05		Individual work on alignment + Q&A	#3	All	Individual work		2	112-113	
15:05	00:05	Teaching & learning strategy (T&L)	Introduction	#3	ML	Mini-lecture		4	114-117	
15:10	00:05		T&L activities + discussion	#3	All	Plenary discussion/Q&A		2	118-119	
15:15	00:05	Break					Prepare breakout rooms	1	120-120	
15:20	00:10		FAIR model + examples + learning levels	#3	ML	Mini-lecture		16	118-133	
15:30	00:10		Formulating the T&L with FAIR	#3	ALL	Individual work		1	134-134	
15:40	00:10		Sharing of T&L / FAIR	#3	ALL	Peerwork	Breakout if time permits	1	135-135	
15:50	00:05		Q&A + assignment	#3	ALL	Plenary discussion/Q&A		3	136-138	
15:55	00:05		Next session + sponsor	#3		Individual work post workshop		3	139-141	
16:00	00:10	End of 3rd session								

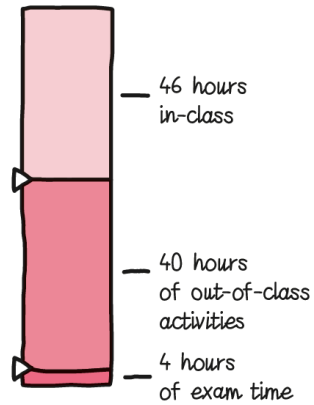
Connecting *in-class* and *out-of-class* activities



In-class learning

Out-of-class learning

90 hours, including:



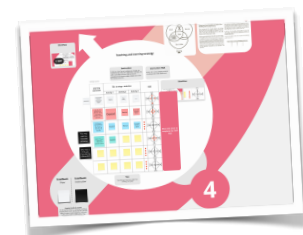
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Formulate your teaching & learning strategy

In your MIRO board:

- List your learning outcomes (first column)
- Pick **1 learning outcome** and indicate the teaching strategy envisaged for the ILO (columns) - Write one learning activity per post-it note
- Indicate the FAIR positioning for **1 learning outcome** in relation to the activities chosen



10 minutes

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Sharing your teaching & learning strategy

1. Explain your teaching & learning strategy to your colleague (choose 1 learning outcome)
2. Your colleague will give you feedback based on the FAIR model to check that the strategy corresponds to the target learning outcome
3. Modify your strategy (add/modify/delete post-it notes) according to your colleague's comments
4. Place your post-it notes on the canvas, grouping them together (you can number them and number the learning outcomes)

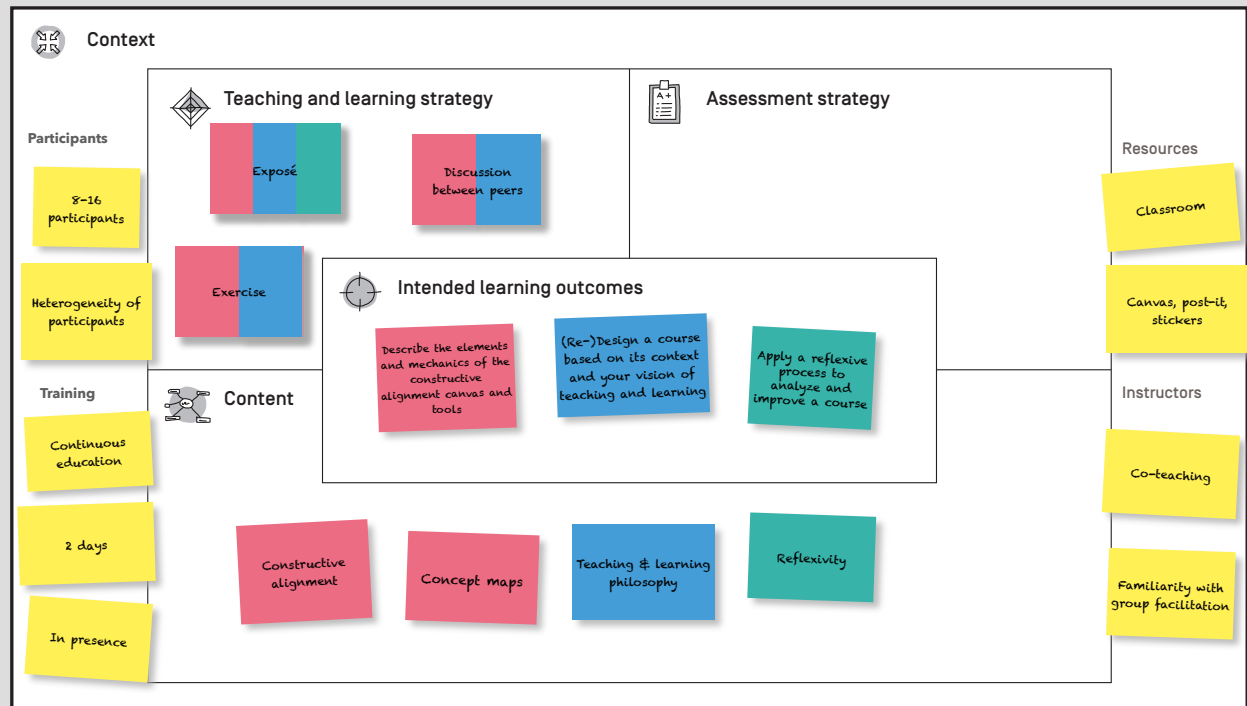
5 minutes x 2



Q&A on teaching and learning strategy

The constructive alignment canvas

Course title : Reflecting on university teaching Designed by : ML/MA Date : 24.01.2025 Version : 1.0



Source : Lanarès, J., Laperrouze, M., et Sylvestre E. (2024). Course design, Lausanne : PPUF. The list of questions and associated items is not exhaustive. Additional information can be found in the book "Course design".



Assignment

- Indicate the teaching & learning activities for all the ILOs with FAIR (iterate if necessary)
- Review your buddy's T&L activities (4)

Deadlines:

- 19 November, noon for participant
- 20 November, noon for buddy
- 27 November, noon for coach

Individual MIRO board - 60 minutes (est.)



Next time

Aligning assessment modalities & criteria with learning outcomes

- Debrief on T&L strategy
- Assessment strategy

Zoom - 28 November - 2.30PM (Tallinn time)



<https://epfl.zoom.us/my/marc.laperrouza>



The present activity is concluded under the Education and Youth Programme and the list of measures of the Cohesion Policy Funds Implementation Plan, measure 21.4.4.2 “Links between education, society and the labour market”, intervention “Quality of higher education, internationalisation and doctoral schools”, action “Quality of higher education and internationalisation”.



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