

D4

Creativity processes



Goal	The main goal of this activity is to introduce participants into ways of creative thinking, basic brainstorming methods, how to use design thinking in their project and what is innovation challenge work.
Format	Workshop
Recommended duration	4 hours
Content of the training activity	<p>Introduction</p> <p>Ways of thinking (20 %)</p> <ul style="list-style-type: none"> ● The difference between divergent (D) and convergent (C) thinking ● Basic brainstorming methods (D and C) ● Additional brainstorming methods — individual, group, mix <p>Design (creative) thinking (20 %)</p> <ul style="list-style-type: none"> ● “Thinking outside the box” — what is it and why you should use it ● Stages of design thinking <p>Innovation challenge work (10 %)</p> <ul style="list-style-type: none"> ● Basic info — how it works and examples <p>Exercise (50 %)</p> <ul style="list-style-type: none"> ● Groups work
Expected learning outcomes	<p>After taking this course/training activity, the PhD student should be able to:</p> <ul style="list-style-type: none"> ● Know difference between D and C thinking ● Understand basic brainstorming methods and how to use them ● Know how they think and what brainstorming method is best for them ● Know how to use “design thinking” in their project work ● Understand what innovation challenge work is <p>At the workshop, participants will use brainstorming methods and some design thinking stages to devise a product/idea and following with pitching to stakeholders. By this, they demonstrate if they understood the core of this activity.</p>
Trainer/facilitator qualification	The trainer should be familiar with how creative thinking works and understand differences between divergent and convergent thinking. They should have a good knowledge of design thinking and should be able to explain it stages, ideally by using practical examples. They should be experienced in group work facilitation and providing feedback.

Recommendations and suggestions for course/activity setup and methods used:

	Duration	Activity description
Course/activity set-up and methods used	20 min	Introduction + discussion with participants about the results of the quiz, which they should take in advance.
	100 min (two breaks /10 min)	Theory presentation — which includes topics mention in the content of the activity.
	90 min (break 10 min)	Exercise (group work). Participants should be divided into groups (with max. 4 members per group). Each group should devise a different product or service idea. They should use the methods and stages of design thinking to devise an idea. In the end, they should present the outcomes of the brainstorming exercise to the plenary. Each group will also be assigned a stakeholder role (e. g. various groups of users, investor, regulator etc.) they will use this role when giving feedback to presentations of other teams.
	30 min	Exercise (group presentations) — each group will present (e.g. via short PowerPoint presentation) their outcome and afterwards receive feedback from the stakeholders group.
	15 min	Discussion + ending
Recommended number of participants	Min: 10 Max: 20	
Forms of active engagement	The participants will be engaged in exercise (group work). When creating the groups consider matching students from different disciplines. This type of course is ideal for encouraging interdisciplinary collaborations.	
Recommended pretraining activities	The participants will be asked to make a quiz to explore what type of thinking they use divergent or convergent. Then, the activity will start with discussion about their results.	
Follow-up activities/ Take home messages	Further activities might focus on mind mapping, trying out new brainstorming activity or focus more on “design thinking” in their project. These activities can be used in other training courses (e. g. various brainstorming techniques can be used for group work; design thinking can be used in courses focusing on entrepreneurship and developing one’s idea etc.)	
Training handouts	Templates for design thinking exercise (printed or online: https://miro.com/templates/design-thinking)	
Reflection questions	<ol style="list-style-type: none"> 1. What type of creative thinking do you use in your research work and when? 2. How does creative thinking differs from the critical thinking and haw they can support each other? 3. Which techniques to encourage creative thinking do you know? Do you use any of them? 4. How could you use principles of design thinking in your own work? 	
Venue requirements	Space that enables group work in different corners; chairs/tables and flipchart.	

Technical and material requirements	Computer, projector, wi-fi, writing tools etc. In case of online training some app. Allowing collaborative work (google docs, MIRO..)
Where to explore more:	Books: <ul style="list-style-type: none">● The Mind Map book — Tony Buzan● HBR’s 10 Must Reads on Design Thinking — Harvard Business Review● The Design Thinking Toolbox: A Guide to Mastering the Most Popular and Valuable Innovation Methods — Michael Lewrick Webpages: <ul style="list-style-type: none">● https://asana.com/resources/convergent-vs-divergent● www.interaction-design.org/literature/topics/design-thinking