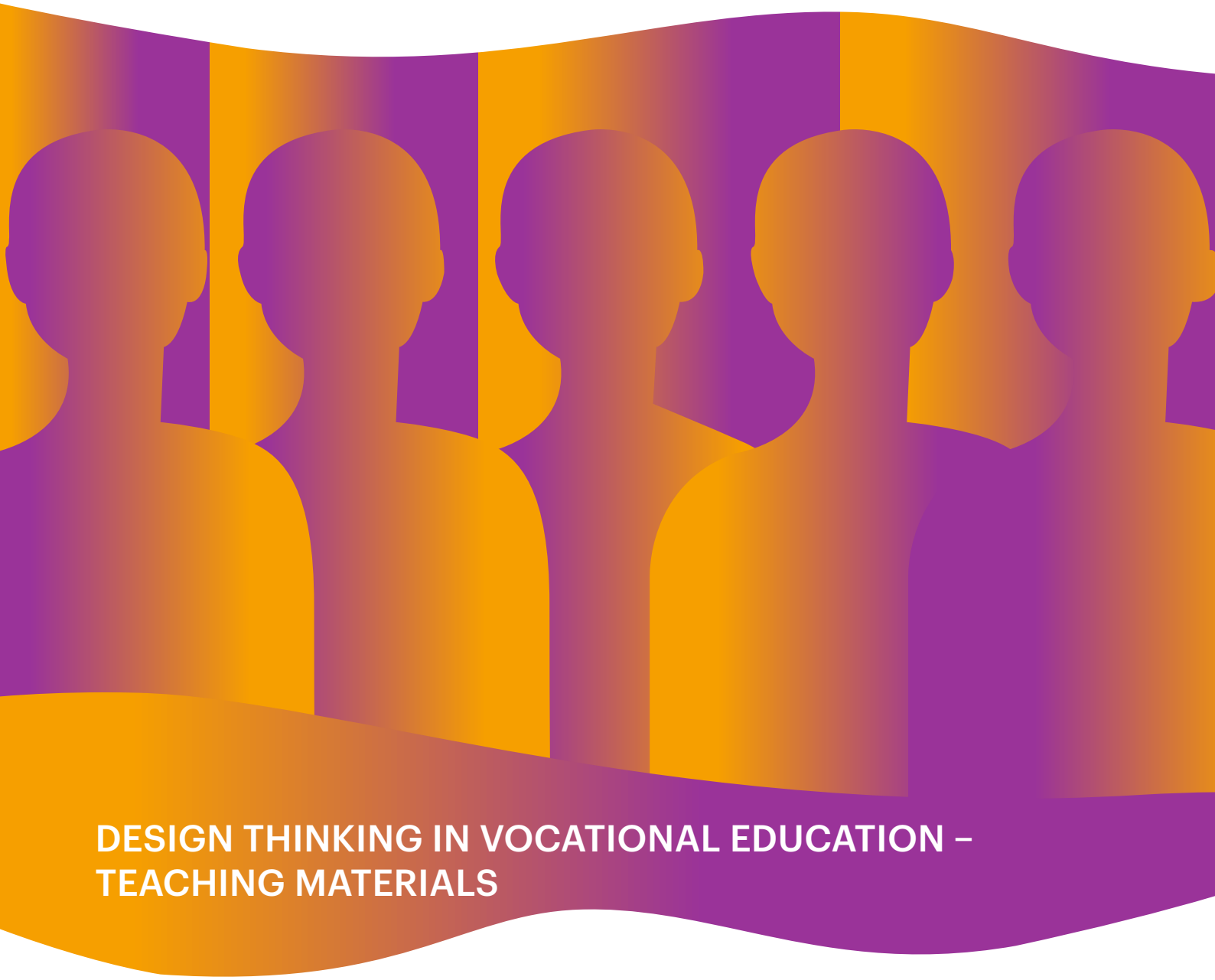
EDUCATION ARCHITECTS

INTEGRATION OF INCLUSIVE COMMUNICATION IN VET DESIGN THINKING PRACTICE



DESIGN THINKING IN VOCATIONAL EDUCATION – TEACHING MATERIALS

Co-funded by the European Union

Publication prepared as part of the project “Education Architects” No 2022-1-PL01-KA220-VET-000088892
All photos and graphics used in this publication are sourced from free resources and/or were created using Adobe InDesign.
Co-Funded by the European Union. Views and opinions expressed are however those of the author(s) only and
do not necessarily reflect those of the European Union or the Foundation for the Development of the Education
System (FRSE). Neither the European Union nor FRSE can be held responsible for them.

Co-funded by the European Union
INSPIRE® CONSULTING
EVM GRUPO
SYNTHESIS CENTER FOR RESEARCH AND EDUCATION

Introduction

Welcome to Your Hands-On Companion to the Design Thinking Journey

More than just a toolkit, this compilation of teaching materials for the application of the Design Thinking methodology is your hands-on companion for implementing Design Thinking in vocational education and training (VET). This toolkit was created with you in mind, whether you are a VET trainer creating learner-centred experiences, a VET educator preparing your students for real-world challenges, or a VET student hoping to apply creativity to your field.

Built to complement the main manual and other learning resources, this collection of tools brings the Design Thinking process to life. Each activity, template, and method are designed to be directly applicable in classrooms, workshops, and hands-on training environments. Regardless of your goals—creating novel products, enhancing service delivery, or reconsidering how to involve students in real-world, work-based contexts—this toolkit will help you along the journey. Here, theory meets practice in a way that feels relevant and empowering.

Each tool is crafted to help you:

- Empathize deeply with users, learners, and stakeholders,
- Define real challenges in your VET context—from workplace problems to classroom dynamics,
- Ideate boldly and creatively, encouraging fresh thinking from all participants,
- Prototype quickly and collaboratively, turning ideas into tangible solutions,
- Test and refine your approaches based on real feedback and observed impact.

In addition to providing VET teachers with the tools they need to make learning more dynamic, this toolkit aims to boost students' confidence by equipping them with the abilities to solve problems creatively, collaborate with others, and take initiative.

Use this toolkit to:

- Strengthen problem-solving and critical thinking skills relevant to real jobs and sectors,
- Empower learners to take ownership of their learning through hands-on, practical inquiry,
- Promote inclusion, adaptability, and innovation, essential traits for both educators and professionals in today's evolving workplaces.

Whether you are developing learner-centred ICT tools, refining a workshop process in automotive training, or investigating service design in the hospitality industry, this toolkit encourages you to jump in, try new things, and lead with creativity and empathy.

Let Design Thinking transform your learning environments—and prepare the next generation of skilled professionals to not just enter the workforce but improve it.

Creativity is intelligence having fun

Albert Einstein

Content

Tool Page

TOOL 1 01_PREPARATION_01_PROJECT_BRIEF

ACTIVITY NAME	**Project Brief**
DESIGN THINKING PROCESS PHASE	Preparation for the Design Thinking Process
ACTIVITY DESCRIPTION	A project brief is a simple document that contains key information about the project or challenge the team is working on. It is a tool for focusing attention and understanding the problem the project aims to solve. Typically, the project brief includes a description of the project, target groups, possible project constraints, expected project outcomes, and milestones. The project brief is a starting point that helps clarify and formulate project challenges and provides clear directions for the design thinking process. A project brief for teachers is like a lesson plan—it contains all the key information needed to conduct classes successfully. It is a tool that helps focus attention on the lesson's objective and understand what challenges need to be overcome to achieve the intended learning outcomes. In a project brief, the teacher includes a description of the project, i.e., the lesson topic and the goals they want to achieve. They then define the target group, i.e., the students for whom the classes are intended, taking into account their skill level and educational needs. The teacher also considers possible project constraints, such as time, availability of materials, or special student requirements. In the next part of the brief, the teacher outlines the expected project outcomes, i.e., what students should achieve and learn by the end of the lesson. Finally, milestones indicate the key stages of project implementation and allow the teacher to monitor progress. With a project brief, the teacher has a clearly defined action plan and knows how to conduct lessons to achieve the intended educational goals.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To create a clear and consistent description of the problem or challenge that the design team will be working on.

EDUCATION ARCHITECTS

PREPARE

1. PROJECT BRIEF
EDUCATION ARCHITECTS

PROJECT DESCRIPTION

EXPECTED RESULTS

WHO IT CONCERNS?

MILESTONES (POINTS MARKING INDIVIDUAL STAGES OF THE PROJECT)

LIMITATIONS

IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: 1. **Start with a description of the project (20 min).** This will require understanding the context of the project and the challenge you are working on. Clearly describe the problem the project aims to solve. 2. **Define clear project goals (20 min).** What do you want to achieve? What are the expected results? Goals should be measurable and realistic. 3. **Identify who the project's target group is (15 min).** What are their needs, expectations, and behaviours? It is important that the project focuses on delivering value to this group. Keep this initial analysis general, as we will explore it later using more technical tools and specific methodologies. 4. **Determine existing and potential project constraints (20 min).** Consider what might pose the greatest obstacles to project implementation. 5. **Identify the most important "milestones" in the project (15 min).** Consider which tasks need to be completed to ensure the project's progress.
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Set a precise definition of goals and action strategies, • Identify the target group and do an initial analysis of user needs, • Have a clear direction and action plan, • Have a list of project constraints and potential barriers
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Goals should be defined in a simple and clear manner; they should also be achievable so they can be verified at the end of the project, • When identifying the target group, it is worth creating a stakeholder map—this will help accurately define the appropriate target group, • Consider creating a project timeline, which involves determining the project's duration and the stages of its implementation, • When preparing a project brief, clarity and simplicity are essential. The brief should be understandable to all project team members. Avoid unnecessary linguistic complexity, and be sure to discuss the brief with the team, • Treat the project brief flexibly—it is not a static document. Update it as the project evolves.

TOOL 2 01_PREPARATION_02_TEAM_ALIGNMENT_MAP

ACTIVITY NAME	**Team Alignment Map**
DESIGN THINKING PROCESS PHASE	Preparation for the Design Thinking Process
ACTIVITY DESCRIPTION	The team alignment map is an extremely useful tool for VET educators, helping to define goals, tasks, risks, and expectations at various stages of educational projects or teamwork. Similar to its use in managing business projects, a team alignment map for educators ensures clarity and focus on the team's activities. At the beginning of a project or educational period, the team can use this map to specify the main goals and tasks they aim to achieve, identify potential risks, and set shared expectations. Importantly, this map is not a static document but a flexible tool that can be updated and adjusted as the project or teamwork progresses. This allows for continuous clarity and focus, enabling educators and team members to effectively guide their actions toward achieving the intended outcomes. With a team alignment map, educators can maintain consistency and focus, even as the project or teamwork evolves.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to create a clear and consistent action plan for the team within the context of the project. The team alignment map is a document that helps maintain clarity and coherence among team members and serves as a reference point throughout the project. It is a tool that enables teams to work more effectively, stay focused on significant goals, and act in line with established guidelines, contributing thus to the successful completion of projects and tasks.

EDUCATION
ARCHITECTS

2. TEAM ALIGNMENT MAP
EDUCATION ARCHITECTS

COMMON GOALS
WHAT DO WE WANT TO ACHIEVE

SHARED COMMITMENTS
WHO WILL BE RESPONSIBLE FOR WHAT?

SHARED RESOURCES
WHAT RESOURCES DO WE NEED?

COMMON RISKS
WHAT OBSTACLES MIGHT WE FACE?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Define Goals and Tasks (10 min):** Collaborate with the team to determine the main goals of the project or task. Then, move on to specifying in more detail the specific tasks that need to be completed to achieve these goals.
2. **Establish Common Commitments (15 min):** Define the roles and responsibilities of each team member within the context of the project or task. Clearly indicate who is responsible for which tasks and what the expected outcomes are.
3. **Identify Common Resources (20 min):** Consider the resources available within the team. Try to determine which resources will be necessary for the project and identify who can provide or access them.
4. **Determine Common Risks (30 min):** Reflect on potential difficulties in the project. Identify strategies to address and manage these risks effectively.
5. **Review and Update (15 min):** Revisit the entire map and make updates if new information has emerged.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

1. Have a set of key information and data that helps the team and managers better understand and manage the project or teamwork.
2. Have a clearly defined list of common goals, commitments, necessary resources, and potential challenges.
3. Have a set of indicators that will help monitor project progress and evaluate the effectiveness of the team's actions.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- **Involve All Team Members:** It is important that all team members participate in creating the map. This ensures that everyone clearly understands the project goals and is more engaged in its implementation.
- **Prioritize Goals:** Defining the most important project goals will help you focus on key tasks and avoid distractions. This leads to better results in less time.
- **Clearly Define Responsibilities:** Assign specific tasks to individual team members and establish who is responsible for completing them. This facilitates the division of work and improves team efficiency.
- **Provide Detailed Task Descriptions:** The more detailed the task descriptions, the easier it will be to avoid misunderstandings and ensure everyone knows their responsibilities. It also simplifies tracking project progress.
- **Encourage Openness to Feedback and Suggestions:** Be open to feedback and suggestions from other team members during the creation of the map. This contributes to improving the plan and allowing for adaptation to evolving needs and conditions.
- **Ensure Accessibility of the Map:** The team alignment map should be easily accessible and familiar to all team members. This guarantees that everyone has a clear understanding of project goals and tasks and can work more effectively towards their realization.

Remember, creating a team alignment map is a process that may require time and effort, but it can significantly enhance the efficiency of your work. Therefore, it is worth investing in its proper development and ongoing maintenance.

TOOL 3 01_PREPARATION_03_PROJECT_PROCESS_AGENDA

ACTIVITY NAME	**Project Process Agenda**
DESIGN THINKING PROCESS PHASE	Preparation for the Design Thinking Process
ACTIVITY DESCRIPTION	The Design Thinking Project Process Agenda is like a table of contents for a creative problem-solving handbook. It provides a complete schedule of activities that guides the project team through the entire process. This agenda includes all the necessary steps and stages required for project success. It serves as a map, showing what to do and in what order to effectively apply the Design Thinking methodology. The Design Thinking project process agenda not only outlines the general actions but also offers a detailed plan for each stage—from understanding the problem to generating ideas, prototyping, and testing solutions. It serves as a roadmap for the project team, providing clear direction and helping maintain focus on the end goal. Preparing the Design Thinking agenda is like creating an action plan for our project. The main objective of this plan is to ensure the project is carried out smoothly and effectively.
ACTIVITY OBJECTIVES	Preparing a Design Thinking process agenda is like creating an action plan for our project. The main goal of this plan is to help us run our project smoothly and effectively. The agenda is like our organiser, helping us structure all the steps we need to take to achieve our goal. Thanks to it, we know what we are doing and in what order, which makes our work more organised and focused. Importantly, the agenda allows us to concentrate on solving specific problems or challenges that arise during the project. It is like a torch, shining light on the areas on the areas that need our attention most—making us more effective in addressing them. The agenda is also our megaphone – it facilitates communication within the team, helping us understand the project goals and track progress. This keeps all team members informed and allows them to work together toward a common goal. In short, preparing a Design Thinking process agenda is like creating a map for our project – it shows us the path to success and helps us get there efficiently and effectively.

EDUCATION ARCHITECTS

3. PROJECT PROCESS AGENDA
EDUCATION ARCHITECTS

MEETING OBJECTIVE

EXPECTATIONS

No.	ACTION	HOURS	SCOPE OF ACTIVITIES	MATERIALS AND TOOLS	RESPONSIBLE PERSONS

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Understand the project goals and challenges (30 min)**: Begin by considering why you are actually embarking on this project journey. What do you want to achieve? What are the main problems you aim to solve? Understanding these goals will help you focus on the right tasks.
2. **Create a schedule (60 min)**: Next, develop a schedule that covers all stages of the Design Thinking process, such as Prepare, Empathize, Define, Ideate, Prototype. Start by describing each stage and determining exactly what needs to be done at each stage.
3. **Select Design Thinking tools and techniques (30 min)**: Decide which Design Thinking tools and techniques are most suitable for your project. You can choose from a variety of methods, such as brainstorming, user mapping, persona creation, and prototyping. It is important to tailor them to the specific context of your project.
4. **Assign tasks to team members (30 min):** Assign appropriate tasks to each team member taking into account their competencies and roles within the project. Everyone should have clearly defined tasks to perform to ensure the work progresses efficiently.
5. **Organise process sessions (30 min)**: Plan when and where the meetings and process sessions will take place. Choose times and locations that are convenient and accessible to all team members to ensure full participation.
6. **Final review of the agenda (30 min):** Review the entire project process agenda once more and make any necessary additions or adjustments. Ensure that all stages are clearly defined and that everyone understands their role.

With this plan, you are ready to carry out your project using the Design Thinking process!

OUTCOMES

By the end of the activity, learners will have gained the ability to understand in depth the following:

1. **A set of information and tools for project management:** The agenda gives us access to all the necessary information and tools that help us focus on solving problems and fostering innovation. It acts as our toolkit, empowering us to manage the project effectively.
2. **Project schedule:** The agenda includes a schedule of activities, i.e. a plan that shows us what needs to be done and when. This allows us to know what to expect and respect deadlines for each activity.
3. **Detailed list of tasks and their scope:** The agenda is complemented by a detailed list of tasks that outlines exactly what needs to be done at each stage of the Design Thinking process. It also defines the roles of team members for each task, ensuring that everyone understands what is expected of them.
4. **Tools to be used during the process:** The agenda also contains information about the tools and techniques we will be using during the project, such as brainstorming and prototyping. This provides clarity on which tools we will have available and how to use them effectively.
5. **List of places:** The agenda specifies where each activity will take place, ensuring better organisation and coordination throughout the project.

In short, thanks to the project process agenda, we have everything we need to run the project efficiently and in an organised manner. It is our action plan ensuring clarity, enhancing coordination, and streamlining our work.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

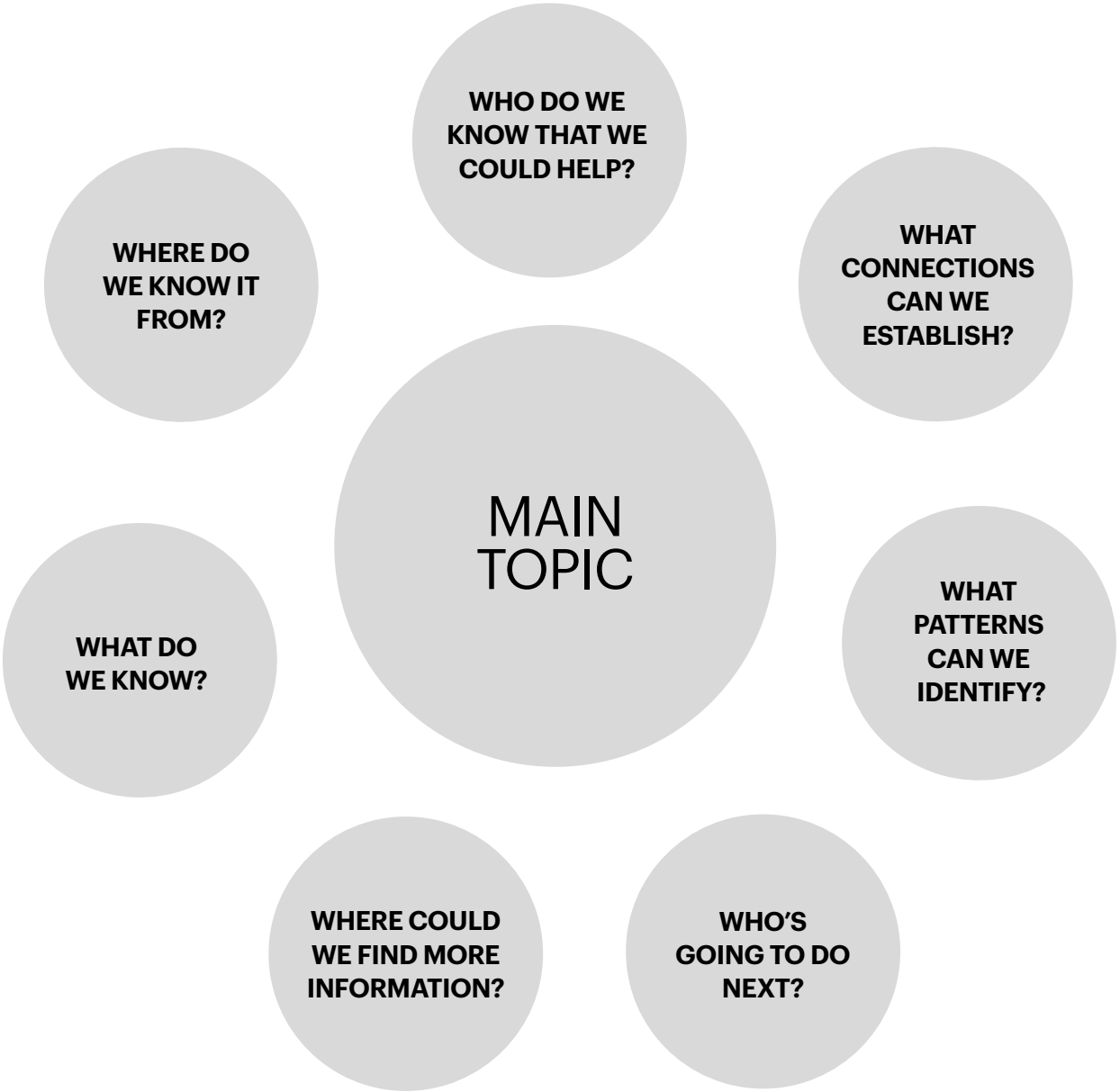
- **Agenda flexibility:** When preparing the agenda, it is important to remain flexible. The Design Thinking process can be surprising, so it is wise to approach planned activities with adaptability. This means being ready for changes and adapting our plans as needed throughout the project.
- **Basing the agenda on the stages of Design Thinking:** It is a good idea to structure the agenda around the stages of the Design Thinking process, as these define the framework for the entire process. It is worth adapting our detailed activities to each stage so that it's clear what should happen when.
- **Consider the time needed for each stage:** Be mindful of how much time each stage may require. Some may need more time than others, so it is important to plan our agenda accordingly to allow sufficient time for each stage.
- **Monitor progress and evaluate the project:** It is essential to establish mechanisms to monitor progress and evaluate the project. Regularly reviewing how the project is advancing will help ensure goals are met. This will allow us to track our achievements and make adjustments as needed.
- Remember that flexibility, a strong understanding the Design Thinking stages, and consistent progress monitoring are key to the success of our project.

TOOL 4 02_EMPATHIZE_04_BUZZ_REPORTS

ACTIVITY NAME	**Buzz reports**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Buzz reporting is a simple technique that resembles an initial brainstorming session of ideas and concepts emerging from various sources and team members. It serves as a starting point for sharing information on a specific topic. A buzz report typically involves assessing how much the team already knows about the topic and identifying where to look for more information.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to create an initial and agile vision of the topic, what the team will be working on, and what connections exist among the different items raised. • to identify potential directions in which it could be interesting to do further research.

EDUCATION ARCHITECTS

4. BUZZ REPORTS
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: 1. **Introduction (5 minutes):** During this introduction, the purpose of the activity will be explained, along with the structure that will be followed. 2. **Clarify scarcity of knowledge on the topic (10 minutes)**: This session involves identifying existing gaps in knowledge. Some helpful questions include: Does anyone on the team have knowledge about this topic? To what extent? Does anyone understand the context of the challenge? How well? 3. **Sources of information (10 minutes)**: In this session, the team will suggest specific sources that can be consulted to address what is currently unknown to the team. After brainstorming ideas on a whiteboard regarding where to find information, the team will divide the sources among members to begin the research. 4. **Research (60 minutes)**: During this session, ach person will explore the assigned sources and may also note additional relevant sources on the whiteboard. These should include any newly discovered, interesting resources that could enhance the research. The objective is to collect as much information as possible to form a broader initial understanding of the challenge. 5. **Debate and discussion (30 minutes)**: Each team member will present their findings, as well as other sources that could be explored. They can also suggest the direction the research should be pursued, toward which lines, etc. The objective of this part of the activity is to build a shared foundational knowledge on the topic. 6. **Clarify responsibilities (10 minutes)**: End the session by answering the key question: Who does what and when will it be done? Ensure that everyone agrees on the next steps?
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Work more efficiently by identifying who knows what and where to find relevant information. • Share team knowledge to facilitate task execution. • Ensure that all team members start from a common understanding of the topic.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Keep a timer on each bubble/question. Agree at the beginning of the session on how much time each section should take, based on how much information each person considers valuable for each part and how long it might take to share.
- Give each person a few minutes to gather ideas once the activity is explained.
- The design of the buzz report should be treated flexibly; it is not a document that cannot be modified. It is worth updating and adapting it based on the relevant questions posed for each topic.

Read the following example carefully to grasp the concept of Buzz Report better:

In this section, we will adapt the Buzz Reporting process to a specific educational context: conducting initial research on Romani culture to support Romani students, who attend vocational and technical schools and centres, more effectively, with the aim of generating inclusive, respectful, and contextualised educational proposals.

Buzz Report Title: Getting to know Romani culture to improve our educational response

General objective of the Buzz Report:

To build a shared and well-founded understanding of Romani culture that allows for the design of contextualised, inclusive educational actions which respect the identity and values of these students.

Participants:

Teaching staff working with Romani students (e.g. tutors, subject teachers, school counsellors, heads of studies, and social educators if applicable).

Step 1: Clarifying the knowledge gap (10 min)

Activity: Quick and honest brainstorming on post-it notes or whiteboard.

Each person writes:

- What do you know about Romani culture?
- How is it expressed in your classroom (if at all)?
- What do you know about the context of Romani pupils in your school or neighbourhood?

Possible questions:

- What aspects of Romani culture and history do you know?
- What don't you understand or feel uncertain about?
- What cultural differences do you perceive between what the education system expects and what Romani culture values?
- What stereotypes might you be unwittingly repeating?

Expected result: An initial map of knowledge and gaps. For example:

- We know little about their history and family values.
- We do not fully understand their attitude towards secondary schooling.
- There is confusion about whether certain customs are cultural or individual.

Step 2: Sources of information (10 min)

Activity: On a whiteboard or digital mural, answer the following questions:
- Where can we find reliable information about Romani culture?
- What sources can help us avoid stereotypes?

Examples of possible sources:
- Interviews or talks with Romani intercultural mediators.
- Documentaries and materials from the Institute of Romani Culture.
- Academic articles or books (e.g. publications by Pastora Filigrana, María Sierra, etc.).
- Associations such as FAGA, Fundación Secretariado Gitano.
- Testimonials on YouTube, podcasts or blogs run by Romani people.

Breakdown: each team member chooses 1-2 sources to explore further in the next phase.

Step 3: Individual research (60 min)

Each participant explores their source(s) and notes down:
- 2-3 key ideas they learned.
- Phrases or concepts that have surprised them or changed their perspective.
- New sources discovered during the research process.
- Questions that emerged and require deeper investigation.

During this process, the team updates a shared digital wall or blackboard with new relevant information.

Step 4: Collective discussion and dialogue (30 min)

Each person briefly shares their findings.

Guiding questions for discussion:
- What patterns are repeated across our findings?
- What preconceived ideas have we now reconsidered in our understanding of our Romani students?
- Are there assumptions we are now reconsidering?
- What do you think are the key issues to explore further (education, gender, family, history, language, etc.)?

A common panel of knowledge + emerging doubts is constructed.

Step 5: Defining actions: who does what and when (10 mins)

Time to move from insight to action. This is where it becomes concrete:
- What aspects are we going to investigate further and who is in charge?
- What immediate changes can we implement in the classroom or school?
- What external partnerships can we seek (families, associations, mediators)?
- When will we meet again to share progress?

ACTION	RESPONSIBLE	DATE	DESIGN
Contact with Fundación Secretariado Gitano	Counsellor	Friday	activity on Romani history for tutorials
Next	Tutor 1 and Tutor 2	Wednesday	
Explore curriculum proposals from other Romani-inclusive schools.	Head of Studies	In two weeks	

TOOL 5 02_EMPATHIZE_05_INDIVIDUAL_INTERVIEW_QUESTIONNAIRE

ACTIVITY NAME	**Individual Interview Questionnaire**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Individual questionnaires are used during meetings with our user (persona) and the research team to gain a deeper understanding of the user and to collect information about their preferences, attitudes, and perceptions related to the topic under study.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To gain a detailed understanding of the user, including their motivations, desires, and deeper thoughts. • To uncover information that may not have been clear during initial meetings or observations. • To extract insights, as they eliminate the influence of group dynamics—where differing roles and hierarchies can cause some voices to be less heard than others.

TOOL TEMPLATE

There is a suggested template to have before the interview. It is important to note that this template does not replace the interview itself, which will require much more time, but rather serves as a way to better structure the information and knowledge that could be obtained from an interview.

EMPATHIZE

5. INDIVIDUAL INTERVIEW QUESTIONNAIRE
EDUCATION ARCHITECTS

TOPIC:

WHAT YOU THINK YOU KNOW	WHAT YOU WANT TO KNOW	WHAT YOU LEARNED

Each individual questionnaire must take into consideration the following:

- **What is the topic?** Does every party have the same understanding of it? Ask questions such as: "What do you understand by...?"
- **Understand the respondent's background. Ask questions like:** "Tell me about the first time you heard about this." If there are few details, use follow-up questions such as: "Where was it?", "Did you look for more information or ask someone?" If yes, "Who did you ask and why?"
- **What information do we think we already have?** Ask questions to compare and contrast this information: "What would you say about [insert known information]?", "What is your personal experience with this?"
- **What information do we need?** Ask questions that encourage the respondent to offer solutions, for example: "If you had all the resources, how would you fix this situation?", "What would be the best solution for all parties, in your opinion?"
- **If the team has already brainstormed ideas/solutions/projects/products, ask for feedback using questions like: "Would this solution be widely used by others?"**, "To what extent do you think this product would meet the current need?", "Would you buy a product that does the following...?", "Who do you think would buy it?", "Would public administrations invest in this solution?", "Would this new project improve efficiency?"
- **If there have been previous attempts or similar products,** ask about improvements or what was appreciated: "What did the last product/situation offer that you valued?"

IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: 1. With this tool, the aim is to gather user stories and experiences. Therefore, depending on the information the research team wants to extract, a question guide or script should be prepared, including a few basic questions on the topic. 2. In addition to some initial basic questions, it is important that the researcher/interviewer allows open questions, as well as silences, and holds space for the interview to take its own course (within a structure). 3. Ideally the questions should follow a zoom out - zoom in structure: starting from the most general questions and gradually narrowing down to ask about specific details, experiences, attitudes, and impressions on the topic.
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Know first-hand what users may think about the situation. • Understand users' impressions. • Share team knowledge to streamline tasks. • Have an equal starting point for every team member.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • It is important that both the interviewer and the interviewee know there is a set amount of time allocated for the conversation. These discussions can range from superficial to in-depth, depending on the individuals involved, and may last from just a few minutes to several hours. • Keep detailed notes—when the interviewee shares their opinion, it is often contrasted with the perspectives of other users. • When preparing questions, make sure to use open-ended questions to gather more information.

TOOL 6 02_EMPATHIZE_06_STAKEHOLDER_MAP

ACTIVITY NAME	**Stakeholder Map**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	The Stakeholder Map is the visualization of the entire environment that has a direct or indirect connection (but can also influence) our challenge (which is at the centre of the map). It can be considered a zoomed-out view of everything that surrounds and affects our main goal. A Stakeholder Map must be created after the investigation phase, once users have been interviewed and sufficient information has been gathered to build an effective visualization of the challenge's environment.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To gain a broader perspective—who is solving what, what is currently needed, what solutions have been tried in the past, and which individuals may be influential in the decision-making process.

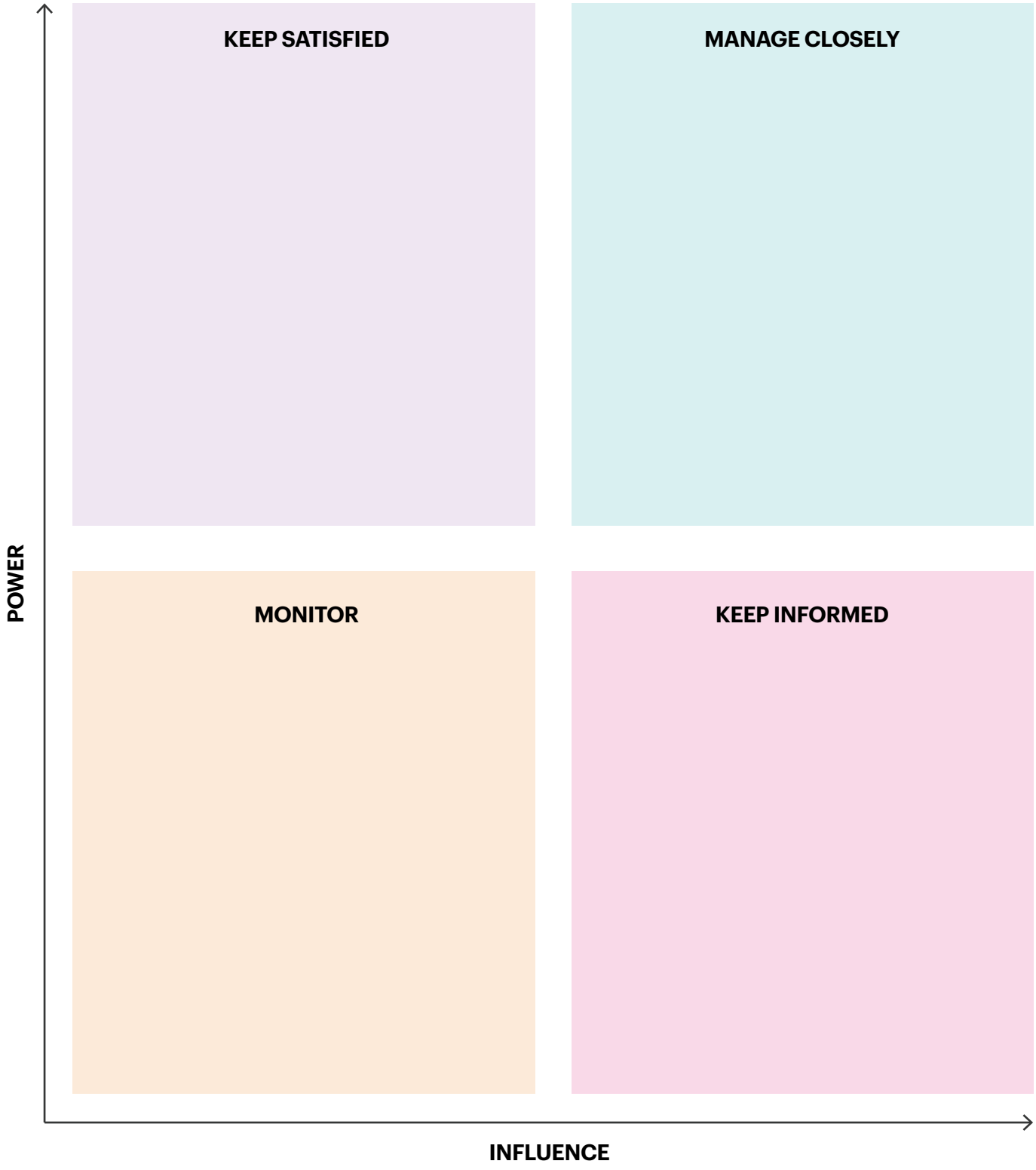
TOOL TEMPLATE

In the following template, the stakeholder map has been organized along the axes of power and influence:

EDUCATION ARCHITECTS

EMPATHIZE

6. STEAKHOLDERS MAP
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (5 minutes):** Once all the conversations have taken place and the research has been completed, the aim is to begin creating a mind map.
2. **Group discussion (45 minutes):** Based on all the information gathered, you may ask:
   - What are the main influences on the problem?
   - Which are the main people affected?
   - How are they currently coping with the situation?
   - Who has opinions and ideas about how to solve it?
   - What factors should this map take into consideration?
3. **Creating the map (50 minutes):** The goals is to compile all the information—factors, people, and situations discovered during the research, along with those known from the beginning—into a map that allows the team to visualize the broader context of the challenge.
   To begin, all stakeholders or relevant profiles should be written on post-it notes (physical or digital) and positioned according to their power and influence. The prior group discussion will help clarify how to prioritize these elements
   Once this is complete, the team should be able to see the full landscape surrounding the user's challenge and determine which stakeholders need to be considered at each step of the process.
4. **Pattern identification (15 minutes):** Once the map is complete, try to answer:
   - What patterns are repeated?
   - Can anything be summarized?
   - Are there any new opportunities?
   - Where is the focus?
   - With which group shall we begin?
   - Which group should be addressed first, and what actions should be prioritized for each?
5. **Group discussion (5 minutes):** The session can conclude by recording who belongs to each group (following our template, focus on those 4 groups: Keep Satisfied, Manage Closely, Monitor, and Keep Informed) and assigning a point person for each. Ensure everything is clear and any team questions are answered. This is also a good time to take notes and reflect on ideas that may have emerged during the activity, as they could be valuable in future steps.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Make informed decisions on how to engage stakeholders.
- Allocate efforts and resources more effectively.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Clarify the difference between the concepts of power and influence (our main axes) to use the template effectively. The section below offers this clarification.

POWER

Power refers to the formal or structural capacity to make decisions, allocate resources, or block/initiate actions. It is an institutional or hierarchical power.

Characteristics of power:

- It is visible and usually recognizable in organizational charts, rules, or regulations.
- It is often linked to official roles: management, leadership, inspection, public administration, regulation, etc.

Key question: Can this person or entity say "yes" or "no" to a proposal or policy?

Example in education: The principal of a school has the power to approve or block an educational project.

INFLUENCE

Influence is the ability to affect the opinions, decisions, or emotions of others, even without formal power.

Characteristics of Influence:

- It can be informal and relational.
- It is associated with credibility, experience, charisma, or personal relationships.

Key question: Can this person change the opinions or behaviour of others without having formal power?

Example in education: A mother who is very active in the parent-teacher association or a student who is a group leader may have a lot of influence over other families or students.

If you want to measure power or influence, you can use a scale.

1. Power (Scale of 1 to 5)

LEVEL	DESCRIPTION
1	Cannot make decisions or take responsibility.
2	Has administrative or support functions.
3	Can make partial decisions or decisions within a specific area.
4	Has power over resources, projects, or teams.
5	Has strategic or decisive power over the challenge.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

2. Influence (Scale of 1 to 5)

LEVEL	DESCRIPTION
1	Has little connection or impact on other people.
2	Known, but with little credibility or connection.
3	Can influence small groups or their immediate environment.
4	Has weight in collective opinion (role model, respected).
5	Generates opinion or behavioural change in many others.

Stakeholder Map Example in VET Education

A stakeholder map can be used both at the beginning of a project to develop a strategy for engaging key individuals and institutions, and during its implementation to adjust communication and actions accordingly.

As an example, let's consider a project focused on implementing Design Thinking methodology in vocational education and training (VET). Stakeholders are classified into four groups based on their level of power/influence and their interest in adopting innovation.

1. Keep them satisfied

Vocational school directors – They influence decisions regarding the adoption of new methodologies, but their engagement depends on available resources and regulations. Ensuring their satisfaction is key, as they can either support or hinder implementation.

Educational support institutions (e.g., education boards, educational organizations) – Their support can facilitate the adoption of Design Thinking, even though they are not directly involved. Their opinion may influence decisions about scaling up the project.

2. Manage them closely

VET teachers and trainers – These are the key stakeholders as they will be implementing Design Thinking in their teaching. Their engagement and willingness to adopt the methodology are critical for the project's success.

Educational program coordinators – They manage teaching processes and can significantly impact how the new methodology is integrated into schools and training centres.

Education innovation experts – They provide tools and training that help with the implementation of the new methodology. Collaborating with them ensures project effectiveness.

Career advisors – They influence students' educational pathways and can integrate Design Thinking into career guidance processes.

3. Monitor them

Vocational school students – They are the recipients of the innovative method, but their role is mainly participation in the learning process. Their reactions and feedback should be monitored to assess implementation effectiveness.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

4. Keep them informed

Students' families - Although they do not have a direct influence on the implementation of Design Thinking, their understanding and support can facilitate a more receptive environment for change. Informing them about the benefits of this methodology and its impact on student skill development can build confidence and support for the project.

Local public administrations - While their influence may be limited at the operational level, being informed allows them to identify opportunities for future collaboration or replication of the project in other educational contexts.

Collaborating companies and the local environment - They are relevant actors in vocational training due to their role in the internships and job placement of students. Keeping them aware of the innovative approach can foster alignment between the training received and the needs of the labor market.

Educational or community media - They can help disseminate the initiative and generate visibility. Regularly informing them can reinforce the positive public perception of the project and the institution behind it.

TOOL 7 02_EMPATHIZE_07_GOAL_DEFINITION

ACTIVITY NAME	**Goal Definition**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Goal definition is the beginning of design according to needs and objectives of the project with the intention of transforming insights gathered into possible actions.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to create a list of objectives that can be useful to evaluate the project as well as to select ideas to develop.

EDUCATION ARCHITECTS

7. GOAL DEFINITION
EDUCATION ARCHITECTS

OBJECTIVES
WHAT MUST BE ACHIEVED? WHAT IS THE TIMING/DEADLINE FOR EACH OBJECTIVE?
REMEMBER OBJECTIVES BUT MUST BE **SMART: S**PECIFIC, **M**EASURABLE, **A**CHIEVABLE, **R**EALISTIC AND **T**IME BOUND.

TEAM
WHAT ARE THE LIMITS THE TEAM HAS?
HOW TO TACKLE THIS LIMITATIONS?

USER
WHO IS THE MAIN USER OF THIS PROJECT?
WHAT ARE THE MOST RELEVANT NEEDS?
INTERESTING CHALLENGES TO CONFRONT?
THINKS THAT COULD HELP TACKLED?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (5 minutes):** During the introduction, the purpose and structure of the activity will be explained.
2. **Creating the Project Map (15 minutes)**
   If the template is not being used, the project map needs to include:
   - What the team wants to achieve with this project
   - Who will be using the solution (the learners!)
   - The team developing the solution
3. **Filling in the Project Map (60 minutes)**
   This is where the team discusses, shares ideas, and begins sketching out the plan. Here are some thoughts to guide the team:
   - What the team wants to achieve: What's the main goal? Why is this project being undertaken? What problems are being solved for the learners?
   - The learners: The focus should be on the people who will benefit from this. Their needs have to be considered:
     - o Top Priority: The most important things that absolutely need to be addressed.
     - o Good Challenges: Interesting ideas that would be great to tackle.
     - o Bonus Helps: Things that would be nice to include if time and resources allow.
   - The team: What are the team's strengths and weaknesses? What skills does the team possess? What's a realistic timeline for each part of the work, considering individual strengths?
4. **Setting Clear Goals (30 minutes)**
   Now, the project map should be distilled into clear goals.
   The "SMART" method will be used to ensure the goals are:
   - Specific (clear and focused)
   - Measurable (it can be determined if they've been met)
   - Achievable (they can actually be accomplished!)
   - Realistic (they make sense for the team)
   - Time-bound (a deadline is set)

   One person can write these down while others use coloured stickers to help sort and decide what's most important.
5. **Quick Catch-Up (30 minutes)**
   Each team member can decide what they'll work on based on their individual skills, and then this will be shared with the group, so everyone knows what's happening.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Know where the efforts are going to be put in.
- Acknowledge each member's part in the process and know who to ask for different parts of the plan.
- Make sure everybody has the same understanding of the following tasks and what is expected from each member on a certain date.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Encourage the team to take on challenges as well as keeping a balance with what can be done and what would be ideal. Make sure all team members understand there are objectives and goal definition and then "life happens", things can change throughout the process and the team may have to adapt to the new situation.
- During goal definition, it is relevant that each member feels comfortable with the language used as well as having the same understanding of what is expected. Set examples, if necessary, especially if it is a new team organization.

Below you can find some application examples to support the process of implementing the specific activity:

GOAL DEFINITION:

- What must be achieved?
  -Increase student engagement in training programs through the introduction of interactive teaching methods.
  -Update training programs to better align with current labour market needs.
  -Provide trainers and teachers with access to modern educational tools.

- What is the timing/deadline for each objective?
  -Introduce interactive teaching methods by the end of the second quarter.
  -Update training programs by the end of the academic year.
  -Equip trainers with modern educational tools within the next six months.

OBJECTIVES:

Remember, objectives must be SMART:
Specific: Each objective is clearly defined and focused on a particular issue.
Measurable: Progress will be monitored through surveys and tests among students and feedback from trainers.
Achievable: Objectives are realistic considering the available resources and time.
Realistic: Objectives take into account the current limitations and capabilities of the VET sector.
Time-bound: Each objective has a clearly defined deadline.

USER:

Who is the main user of this project/product? What are the most relevant needs to be addressed?
Students: Need more engaging and up-to-date training programs.
Trainers and teachers: Need access to modern educational tools and resources.

Things that could help if tackled? Ideally tackled but not priorities.

Additional aspects: Improving technical infrastructure in VET institutions, increasing collaboration with local businesses to better align training programs with market needs.
Not priorities: While important, these actions can be pursued in parallel with the main objectives as resources become available.

TEAM:
What are the limits the team has? How to tackle these limitations? What are realistic timings for each working profile?

Limits: Lack of experience in designing interactive teaching programs and implementing new technologies.
How to tackle: Train the team in modern teaching methods and educational technologies.
Realistic timings: Train the team within the first three months of the project, followed by achieving the other objectives according to the schedule.

TOOL 8 02_EMPATHIZE_08_SWOT

ACTIVITY NAME	**SWOT**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	The SWOT method helps teams understand an educational organization or project's current situation. It does this by looking at its internal characteristics (what it does well and where it struggles) and external factors (potential advantages and challenges). The outcome is a simple matrix, which is the first step in strategic planning.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To grasp the true state of an educational organization or project so that a strong strategy can be developed. • It is a key tool when starting something new, helping to identify the starting point, the project's core value, and areas for improvement to achieve better results.

TOOL TEMPLATE

In the following template, the stakeholder map has been organized along the axes of power and influence:

EDUCATION ARCHITECTS

EMPATHIZE

8. SWOT
EDUCATION ARCHITECTS

STRENGHTS	WEAKNESSES

OPPORTUNITIES	THREATS

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (30 minutes):** In teams or as a single team, choose a real or imaginary project to analyse. This could be a vocational education and training (VET) project, a new educational service, or a product for learning.

Clearly define the project's scope or how the product will be used.
- Identify the target learners.
- Describe the social environment in which the project will operate.
- State the number of team members.
- Outline the team's organizational structure.
- The more thoroughly the idea is defined, the more successful this activity will be. Be creative!

2. **Creating the SWOT analysis (30 minutes):** This space is to think, reflect and collect data.

First of all, put in place a clear purpose or objective for why you are analysing in the first place.

- For the internal analysis: Collect the relevant data and information about the internal aspects of your project/product. This can include finance, operations, competitors and other data. Make sure to collect as much data so you can have a holistic view of it.

- For the external analysis: first, write down relevant questions that will help you gather information from other resources outside the team. You will also need to do relevant research about new educational challenges, new approaches, changes in the learner´s profiles, etc.

3. **Fill in the SWOT map (10 minutes):** This space is to fill in the SWOT template:

Strengths: Some of the questions you will have already answered in the previous step:
- What do we do exceptionally well in education?
- What different approaches will we make?
- What unique resources or capabilities do we have?

In assessing strengths, it is also essential to consider them in relation to current educational models or products.

Weaknesses: Some of the questions you should answer in this section:
- What internal constraints or challenges do we face?
- What must we avoid or minimize to be successful?

Remember that weaknesses are considered opportunities for growth and development.

Opportunities: this is often the most difficult to fill in because they come from a variety of sources.

- What emerging trends are there in education?
- Are there new learner profiles or new needs in education?

This section will require creative thinking, exploration and a forward-thinking mindset.

Threats: pose potential risks or challenges to the success of the educational project. These may be social dilemmas, economic downturns or disruptive technologies among others.
Use these questions to identify them:

- o Are there regulatory changes that may affect our project?
- o What are the user trends that may pose risks?

4. Presenting the SWOT map (15 minutes): Once the team has written down all the information on the SWOT template, they should present it, so everybody understands the starting point of the idea/project/product.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Learn how to come with an idea of business together.
- Identify a project or organization's strong and weak aspects.
- Help them to understand their internal capabilities and external considerations, and the impact thus will have in the future of the project or organization.
- Understand how to properly make decisions when it comes to a business idea.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Investigate as much as you can about your business idea, invest time in creating the scenario in order to be able to enjoy the activity.
- Define the idea as much as possible
- Use something that already exists if you feel it might be easier for you to define everything
- Make sure you are asking the right questions to your teammates and looking for the right information to make the external analysis.

TOOL 9 02_EMPATHIZE_09_THE_5_WHYS

ACTIVITY NAME	**The 5 Whys**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	This activity will provide a useful technique that will help us to get to the root of the problem in an easy and fast way. This activity will be extremely useful when things don't go according to plan. In such cases, we must focus on understanding what really happened, so it doesn't happen again, and avoid acting on assumptions.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • This activity useful whenever we want to explore the root cause of a problem, as it is used in early phases of design to detect the underlying causes of problems. The main outcome will be an open discussion on what brought you to that point by asking "Why?" five times to get to the root of what happened. • It is very important to understand that the main goal of this activity is NOT to assign blame to anyone, but rather to identify the root cause of the problem and help to work towards a solution by assigning responsibilities, creating new processes and building trust within the team.

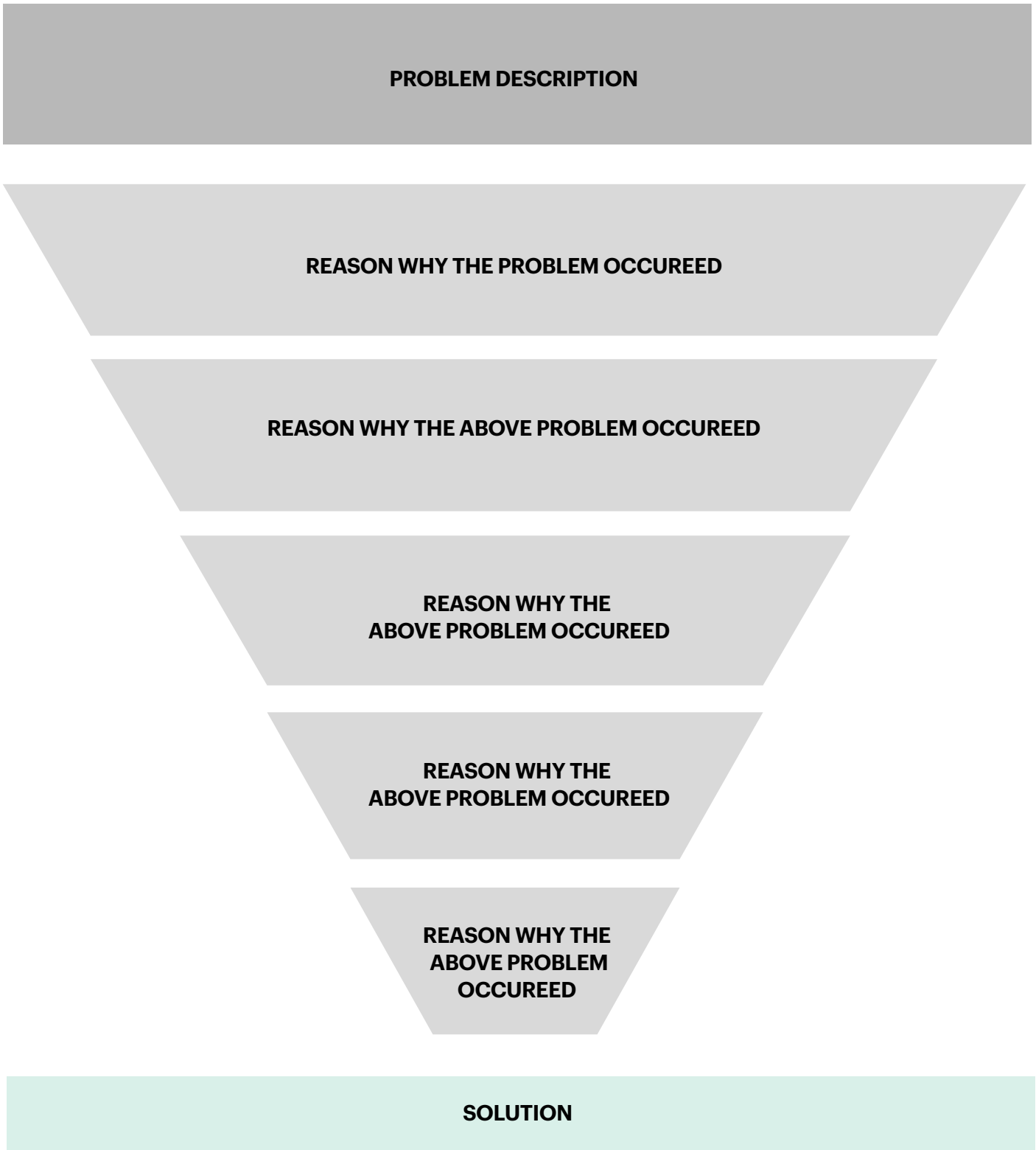
TOOL TEMPLATE

In the following template, the stakeholder map has been organized along the axes of power and influence:

EDUCATION ARCHITECTS

EMPATHIZE

9. THE 5 WHYS
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Preparation (10 minutes):** In teams —or as one team—brainstorm and identify a problem that you are currently facing, have already faced, or that could potentially occur. Choose someone inside the team to moderate the activity.

Example:

- A student comes late to school several times
- A student fails a test despite being well prepared
- The plants in my house are dying
- I don't have time to activity during the week

2. **Problem Brainstorm (7 minutes):** Ask your team the question "Why did this happen?" Set the timer for 5 minutes and have your team add their own answers in a paper or in a collaborative space. Once the 5 minutes are up, share individual answers, and as a team, choose an answer. That answer will become your next problem statement. Write it down —it will now serve as the new focus problem statement.

3. **Repeat the brainstorm (35 minutes):** repeat the step described above until you've asked "why?" a total of 5 times.

4. **Solution brainstorming (10 minutes):** Once you have reached the root cause, have team members propose solutions to your final problem statement and assign responsibilities among team members to tackle the problem.

Example:

Problem: A student comes to school late several times a week.

1. Why? Because I have a hard time getting up in the morning.
2. Why? Because I go to bed late.
3. Why? Because I work the late shift.
4. Why? Because that is when I am scheduled to work.
5. Why? Because those are the only shifts available.

At this point, the root cause should emerge, and the team can decide what changes may be needed.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Avoid assumptions and focus on facts
- Enhance their investigation abilities
- Promote team collaboration among the people involved, as no one will be blamed
- Foster better communication
- Encourage creative and critical thinking

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- The teacher who will lead the discussion is encouraged to take notes.
- Try to move quickly from one question to the next.
- Know when to stop! We don't always need 5 whys, and sometimes we need more! The important point is to stop asking "Why?" when you stop generating useful responses.
- Don't choose a complex problem, as this questioning process works best for simple or moderately complex problems.

TOOL 10 02_EMPATHIZE_10_ANALOGS_AND_ANTILOGS

ACTIVITY NAME	**Analogs and antilogs**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	This activity helps us understand what is happening now and what might happen in the future. We do this by comparing ourselves to others—either similar to us (in the same area of study) or different (in other areas). The terms we use for this differentiation are the following: **Analogs:** think about people, products, projects or entities that you admire and would like to be like. Also, consider things that have worked well in the past, for you or for others. **Antilogs:** identify people, products, projects or entities that you neither believe in nor want to be. There isn't a strict way to do this. It is a random identification in the search for things, ideas and entities that help us to understand or visualize our own identity by providing nuances and mechanics on which to compare ourselves.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Differentiate between analogs (positive references) and antilogs (negative references) as tools for reflection and innovation. • Use comparative analysis to reflect on personal or project-related identity, values, and direction. • Apply the principles of analog and antilog thinking to identify inspiration or boundaries when designing solutions. • Evaluate existing examples (both successful and unsuccessful) to determine the viability and originality of their own ideas. • Foster creative and critical thinking by gaining new perspectives through structured comparison with real-world references.

TOOL TEMPLATE

In the following template, the stakeholder map has been organized along the axes of power and influence:

EDUCATION ARCHITECTS

EMPATHIZE

10. ANALOGS AND ANTILOGS
EDUCATION ARCHITECTS

ANALOGS	ANTILOGS

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction (10 minutes): Explain the purpose of the activity:
   - to explore analogs (similarities) and antilogs (contrasts) to uncover new ideas and perspectives.
   - Provide examples of analogs and antilogs in different contexts to ensure everyone understands the concept.
2. Problem Definition (5 minutes): Present the problem or challenge you want to address. This could be a real-world issue or a creative project.
3. Analog Generation and sharing (15 minutes):
   - Ask participants to individually brainstorm analogs for the problem or challenge. Analogies could and should be drawn from diverse domains, unrelated to the problem at hand.
   - Set a timer and encourage participants to generate as many analogs as possible within the time limit.
   - Each participant writes one analog per sticky note.
   - Have participants share their analogs with the group. As each person shares, ask them to briefly explain why they chose that analog and how it relates to the problem.
4. Antilog Generation and sharing (15 minutes):
   - Following the same process as before, ask participants to individually brainstorm antilogs for the problem or challenge. Antilogs are opposites or contrasts to the problem's characteristics.
   - Set a timer and encourage participants to generate multiple antilogs within the time limit.
   - Similar to the previous step, have participants share their antilogs with the group, explaining their choices and how they contrast with the problem.
5. Insight Synthesis (10 minutes):
   - Facilitate a discussion to identify patterns, insights, and potential solutions that emerge from the analogs and antilogs.
   - Use a piece of paper, whiteboard or flip chart to capture key insights and connections.
   - Based on the insights gained, encourage participants to generate innovative solutions to the problem that are feasible and viable. They can combine elements from analogs, antilogs, and their own ideas.
6. Wrap up the activity by summarizing key learnings, insights, and potential solutions generated through the analog-antilog exploration.

Example on better understanding how user-centred and innovative education centres function:

- Analogs:
  Reggio Emilia. Deep respect for student autonomy, the environment as the third educator.
  Bofill Foundation. Generates knowledge and educational innovation from an inclusive perspective.
  Khan Academy. Democratizes access to knowledge with an adaptive, user-centered approach.

	• Antilogs: Low-cost academies with quick results. Utilitarian view of education, focused solely on measurable results. Model based exclusively on standardized tests. Because it does not promote critical thinking or value student diversity.
OUTCOMES	By the end of the activity, learners will have gained the ability to: • stimulate creative thinking, challenge assumptions, and uncover innovative solutions to complex problems. • explore connections across diverse domains and think critically about the problem space.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Encourage participants to think outside the box and embrace unconventional analogs and antilogs. • Consider rotating groups or partners throughout the activity to foster diverse perspectives and collaboration.

TOOL 11 02_EMPATHIZE_11_ROLE_PLAY

ACTIVITY NAME	**Role play**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	This is a playful activity that two or more people do of a situation that can happen in real life. Instead of mentally evaluating situations, we create a specific context by assigning roles to each participant to simulate a situation. The same scene can be repeated several times, incorporating changes in the character profiles to understand how different persons -in our case students- might act in the same situation.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to immerse participants in a problem or scenario in an engaging way, allowing them to empathize with different perspectives and generate insights.

EDUCATION ARCHITECTS

11. ROLE PLAY
EDUCATION ARCHITECTS

EXERCISE OBJECTIVE(S)

LIST OF ROLES FOR SIMULATION

ROLE

PERSON

STEP OF ACTIVITY

TIME LIMIT

HOW WILL PEOPLE SHOW MASTERY OF THE OBJECTIVE?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (10 minutes):**
   - Explain the purpose of the activity: to understand participants' perspectives deeply through role play, a key aspect of empathetic design and solution finding.
2. **Scenario Selection (5 minutes):**
   - Provide participants with scenario cards, each describing a different persona or situation related to the problem or challenge at hand.
   - Ask participants to choose a scenario they find most interesting or relevant to explore further.
3. **Role Assignment (5 minutes):**
   - In pairs or small groups, assign roles based on the chosen scenarios. Each participant takes on the role of a different character within the scenario.
   - Encourage participants to fully embody their roles, considering the perspectives, motivations, and needs of their characters.
4. **Role Play (20 minutes):**
   - Set the scene for the role play based on the chosen scenario. Participants act out the interactions and experiences of their characters.
   - Encourage improvisation and realistic dialogue to deepen understanding and empathy for the user's journey.
   - Teachers who act as facilitators may observe or participate in the role play to provide guidance and support as needed.
5. **Debriefing (15 minutes):**
   After the role play, gather participants for a debriefing session. Use open-ended questions to facilitate reflection and discussion:
   - How did it feel to embody the role of your character?
   - What insights did you gain about your persona's needs, motivations, and pain points?
   - What surprised you during the role play?
   - How might this experience inform our design process moving forward?
6. **Insights and Ideation (20 minutes):**
   - Based on the insights gained from the role play, facilitate a brainstorming session to generate innovative solutions.
   - Encourage participants to think creatively and build on the perspectives they have explored through role play.
   - Ask participants to share what they have learned and how they can apply these insights to future design projects.
   - Thank everyone for their participation and contributions.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- deepen empathy, uncover user needs, and inspire innovative solutions that are truly user-centred.
- use a structured framework to engage in experiential learning and creative ideation within a collaborative environment.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Record the role play sessions to review key moments and insights later.
- Encourage participants to switch roles or scenarios for additional perspective-taking.
- Use digital tools for remote collaboration and virtual role play if participants are not co-located

TOOL 12 02_EMPATHIZE_12_HUMAN_BINGO_ICEBREAKER

ACTIVITY NAME	**Human Bingo Icebreaker**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Icebreaker activities, like this one, aim to enable participants to gain a deeper understanding of the target group through engaging in activities that foster empathy.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to establish a constructive and welcoming atmosphere, with the goal of fostering first connections. • to build team cohesion through engaging in collaborative activities.

TOOL TEMPLATE

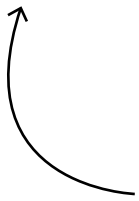
EDUCATION ARCHITECTS

Human Bingo Icebreaker cards are sheets of paper or printouts with a grid containing squares (typically 5x5 but can be more or less depending on the number of participants and time). Each square contains a statement about experiences, traits, or achievements that may be common among participants.

EMPATHIZE

12. HUMAN BINGO ICEBREAKER
EDUCATION ARCHITECTS

I HAVE BROKEN A BONE	I HAVE TRAVELED TO MORE THAN 5 COUNTRIES	I CAN PLAY A MUSICAL INSTRUMENT	I LIKE RUNNING	I KNOW 3 LANGUAGES
I HAVE BEEN TO A ROCK CONCERT	I HAVE SIBLINGS	I HAVE VOLUNTEERED	I LOVE COOKING	I HAVE A DRIVER'S LICENSE
I HAVE BEEN TO A FILM FESTIVAL	I PLAY CHESS	I HAVE NEVER FLOWN ON A PLANE	I HAVE DIVING CERTIFICATE	I HAVE READ "THE LORD OF THE RINGS"



FILL IN WITH YOUR OWN IDEAS

IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: 1. **Preparation (5 minutes):** Each participant receives their bingo card and a pen. The facilitator explains the rules – the goal is to fill as many squares as possible by finding people who meet the condition and getting their signature in the appropriate place. 2. **Group interaction (20 minutes):** Participants start walking around the room talking to others, engaging in social connection to find people who match each of these statements. When they find someone who meets the condition, they ask for their signature in the appropriate square. 3. **Discussion (10 minutes):** Participants are invited to give their feedback on these activities, were they surprised by the commonalities they discovered, or conversely, by the differences? To what extent do these activities contribute to enhancing their teamwork experience?
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Relax and get to know one another better • Share personal stories • Build trust
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Be conscious of your group dynamic, it is important that the groups feel comfortable sharing personal information. • Consider adding prompts that reflect diversity (e.g., disability, cultural background, age). • Provide participants with regular time updates to help them manage the process of completing their Bingo cards (e.g. 10 minutes remaining, 5 minutes left). • This icebreaker can also serve as a lead-in to a related topic. Sentences can therefore be oriented in this way. For instance, if the group is focusing on discrimination, the statements on the Bingo cards can be tailored to reflect experiences of discrimination at various levels (individual, community, or systemic).

TOOL 13 02_EMPATHIZE_13_OBSERVATION_TECHNIQUES

ACTIVITY NAME	**Observation Techniques**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Observation Techniques is designed to help participants refine their observational skills, enabling them to gather rich insights about users and their environments. This activity allows one to get an overall view of places and behaviours without any predefined questions.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to observe with detail, and empathy, enhancing the ability to contribute valuable data to the design thinking process. • To provide practical techniques for effective and focused observation during user research. • to collect the first observation to understand an environment. • to observe the user's natural behaviours in a specific environment to identify potential challenges and opportunities. For instance, this could involve studying how a public space is utilized or analyzing workflows to pinpoint obstacles that arise during the process.

EDUCATION ARCHITECTS

EMPATHIZE

13. OBSERVATION TECHNIQUES
EDUCATION ARCHITECTS

CATEGORY	OBSERVATION DETAILS	NOTES/COMMENTS
Environmental Conditions		
Air temperature	(e.g., °C/°F)	
Weather conditions	(e.g., rain, wind, sun)	
Noise level	(e.g., quiet, moderate, loud)	
Social interactions		
Types of interactions	(e.g., conversations, gestures, facial expressions)	
Frequency of interactions	(e.g., often, occasional, rare)	
Age groups & demographics	(e.g., children, teenagers, adults, seniors)	
User behaviors		
Physical activity	(e.g., walking, running, sitting)	
Use of mobile devices	(e.g., texting, talking, browsing)	
Reactions to the environment	(e.g., interest, boredom, excitement)	
Environmental Details		
Building architecture	(e.g., modern, historic, functional)	
Decorations, street art, greenery	(e.g., murals, plant, sculptures)	
Condition of infrastructure	(e.g., streets, sidewalks, signage)	
Sensory Observations		
Smells in the environment	(e.g., fresh, polluted, food aromas)	
Colors and patterns	(e.g., bright, muted, geometric)	
Tactile sensations	(e.g., smooth, rough, slippery)	
Other Observations		
Unusual events/situations	(e.g., protests, celebrations, accidents)	
Characteristic elements	(e.g., festival, market, public performance)	

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Preparation (10 min):** At the field study site, the facilitator distributes observation sheets—adapted where needed for different abilities (e.g., large print, pictograms, audio)—and provides clear instructions. The goal is to move calmly through the environment by feeling, listening, and observing without remaining stationary. Participants should avoid interacting with users to prevent disrupting normal processes. A recorder can be used to capture various sounds.

Example: Observing a vocational training environment (e.g., a workshop, salon, kitchen, or construction site)
Participants are provided with observation sheets and asked to move calmly through a VET learning space—such as a mechanics workshop, hairdressing salon, training restaurant kitchen, or carpentry lab—to observe how students and instructors interact with the space, tools, and each other. They are instructed to focus on patterns of movement, tool usage, communication styles, safety practices, and accessibility of resources, while avoiding direct interaction. The aim is to capture authentic behaviours and workflows that reflect the everyday learning environment. Participants may also use a recorder to capture environmental sounds like tool usage, machinery noise, or conversations to enrich their observations.

2. **Observation (30 min):** Participants should take detailed, focused notes, capturing significant details, subtle observations, and the context.

Example: Participants document specific behaviours, such as how students navigate the workspace, how they use tools or equipment, how instructors provide guidance or intervene, and any challenges students face (e.g., accessing materials, understanding instructions, or collaborating with peers). They also note environmental factors, such as noise levels, lighting, safety signage, or how the layout supports or hinders learning and workflow.

3. **Discussion (20 min):** Discuss any challenges faced during observations and elaborate strategies for overcoming them. Reflect on your observations and identify any patterns or insights gained.

You can create a map view representing the group's collective observations to highlight the identified points.

Example: The group discusses challenges such as observing without interrupting the training process, interpreting technical procedures, or capturing subtle peer interactions. Together, when they are back in class, they create a visual map of the learning or working space, marking areas where collaboration was strongest, where confusion or delays occurred, and identifying recurring behaviours—such as frequent tool sharing or clustering around instructors during demonstrations.

4. **Debate (30 min):** Based on the natural observations of user behaviour illustrated in the collective map, the facilitator will guide participants to focus on identifying problems and opportunities related to a chosen topic. The goal of this phase is to uncover issues and potential solutions that naturally emerge from a brief observation of the study context.

Example: Based on the map and observations, participants identify issues such as bottlenecks in equipment access, students avoiding certain learning stations, or unclear tool organization. They propose solutions like redistributing materials for better flow, implementing clear tool labelling, or creating designated collaboration areas to support peer learning and improve workshop efficiency.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Get hands-on experience to gain a deeper understanding of the user environment.
- Collect first data with a mix of qualitative and quantitative information.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Ensure that the size of the participant group is proportionate to the observed environment so that their presence minimally impacts the activities being studied.
- Include examples of learners with different needs, for example mobility challenges.
- It is important to let participants observe without providing them with a predetermined outcome (example of predetermined outcome: identify the most used machine in the workshop). This approach encourages more natural observations without bias or specific expectations.
- You can also use the following variation to implement this activity: Divide participants into two groups of four, with each group observing the environment from a distinct perspective, this time from a stationary position. For example, observing a laboratory environment sitting in different angles can provide valuable insights to enhance the ergonomic systems within that setting. This activity highlights the disparities that may emerge depending on the chosen viewpoint. The intensity of observed elements will vary based on the angle taken. This activity emphasizes the value of extending observations to multiple perspectives, maintaining objectivity, and capturing the nuances of the user environment.

TOOL 14 02_EMPATHIZE_14_SHADOWING_LEARNING

ACTIVITY NAME	**Shadow Learning**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	This activity is designed to fully immerse participants in the daily experiences of the users they are designing for. By engaging in activities that require observing and joining users in their daily routines, participants develop a better understanding of user behaviours, challenges, and requirements.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to provide to the participants a hands-on experience of what users go through in their everyday lives. • to encourage empathy by fully engaging participants in the environments and contexts of the target users. • to help participants generate valuable insights to guide the design thinking process.

TOOL TEMPLATE

The observation can be led by this template. However, the context of the shadowing and specific needs of information will also have to be taken in consideration.

EDUCATION ARCHITECTS

EMPATHIZE

14. SHADOW LEARNING
EDUCATION ARCHITECTS

GENERAL OBSERVATION

ACTIVITIES
e.g, tasks, routines, interactions

CHALLENGES
e.g, difficulties faced, obstacles.

FEELING
e.g, emotions felt, overall mood.

UNEXPECTED
e.g, surprising elements, unplanned events.

REFLECTIONS
e.g, thoughts on the experience, personal insights.

QUESTIONS TO THE USER

INSIGHTS
e.g, new understandings, realizations

NEW PATTERNS
e.g, recurring themes, emergent trends

VISUAL REPRESENTATION
e.g, drawing, diagrams, models

OBSERVATION AND PARTICIPATION IN USER ENVIRONMENT

ANALYSIS

IMPLEMENTATION STEPS

This tool aims to provide a real and clear view of the users' life, their use of a product, teaching techniques, or other relevant aspects, to gain better insights. It helps participants step into the users' shoes to better understand their daily challenges. To successfully implement this activity, you can follow the steps below:

1) First, depending on the objectives of the shadowing and the hosting context, you will need to define:
   - What is the background information about the users' environment and their goals?
   - What do you wish to learn?
   - What questions do you want to ask the users?
   - The timing and duration of the shadowing.

2) During the shadowing session, participants will follow a typical day of the user. Observe, ask questions, and participate if possible. Your students should be encouraged to actively empathize with users, imagining themselves in their situation. You should instruct them to carefully listen to users' comments and concerns without interrupting.

3) After the session, discuss how what you have learned can improve user-centred design. Use tools like mind maps, collages, or drawings to share your ideas. Integrate shadow learning into the design process, focusing on creative and user-focused solutions.

To better understand how this works, let's take into consideration an example:
Example: Understanding how a VET student in a hospitality training program manages a typical shift at a hotel front desk.
During the shadowing session, participants follow a peer or a trainee who works or trains at the reception desk of a hotel. They observe how the student interacts with guests, uses booking software, handles complaints, and balances tasks like check-ins, calls, and coordination with housekeeping.

By observing firsthand the daily responsibilities and challenges, participants gain a deeper understanding of real work conditions in the hospitality sector. They also reflect on how training, tools, or workflows could be improved to better support learning and performance in this vocational field.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Deepen their understanding of the user's environment, routine, or process. • Enhance empathy by immersing themselves in user environments. • Be better equipped to generate ideas that directly address user needs.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Advise participants to pay attention to small details that might reveal significant insights about user behaviour and needs. • Take notes of details that might not be relevant in the moment but might be when connected to other users. • Adapt this to show diverse identities—e.g., shadowing a migrant learner or one with dyslexia. • Be aware of bias, which can arise from the influence of known behaviour in the situation being observed. The observer must keep an open mind during the session. • It is important to respect the users and their environment, to show tact when interacting. • Ensure that participants understand any safety protocols and respect users' privacy and boundaries.

TOOL 15 02_EMPATHIZE_15_FOCUS_GROUP

ACTIVITY NAME	**Focus Group**
DESIGN THINKING PROCESS PHASE	Empathize
ACTIVITY DESCRIPTION	Focus groups are small group discussions used to gather detailed feedback or opinions from people. They are guided discussions that include a select number of participants (typically 6-12) who express their views, experiences, and perspectives regarding a particular topic, product, or service. This method is frequently employed in research to obtain qualitative insights directly from users.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to delve into participants' perspectives, revealing their motivations, needs, and possible areas for enhancement. • To gain insights into user perspectives and develop potential solutions.

EDUCATION ARCHITECTS

EMPATHIZE

15. FOCUS GROUP
EDUCATION ARCHITECTS

THEME OF DISCUSSION:

How Can Practical Training and Digital Tools Improve Learning and Job Readiness in VET?

GOALS & OBJECTIVES:

- Understand how practical training and digital tools (e.g., simulations, e-learning platforms) support VET students' learning and engagement
- Explore obstacles students and teachers face when integrating digital tools into vocational education and training.
- Collect suggestions from participants on how to better connect digital tools and hands-on experiences to enhance job readiness and learning outcomes

LIST OF PARTICIPANTS

- VET Students
- VET Graduate
- VET teachers, trainers, and coaches
- Management staff of VET educational institutions

LIST OF OPEN-ENDED QUESTIONS

- How do digital tools help you in your practical training?
- What challenges have you faced when using technology in your learning?
- In what ways could digital tools better support hands-on learning?
- What changes would you suggest to improve your learning experience with technology?

KEY INSIGHTS AND EMERGING THEMES

- Digital Skills Gaps – Some students and teachers feel unprepared or undertrained in using digital tools effectively.
- Hands-on vs. Digital Balance – While digital tools are helpful, they cannot fully replace practical, hands-on experience.
- Access and Infrastructure – Unequal access to devices and internet affects participation and learning quality.
- Motivation and Engagement – Interactive digital tools (e.g., simulations, videos) increase student motivation and understanding.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Preparation:** Provide a predefined scenario or topic for the focus group discussion. It could be a design challenge, a product feature, or any relevant subject. This ensures a structured simulation that aligns with the session's objectives.

   Example: Theme of discussion: How Can Practical Training and Digital Tools Improve Learning and Job Readiness in VET?

   - Clearly outline the goals and objectives of your focus group. What insights do you aim to gather?
   - Identify and invite a diverse group of participants who represent the target user population.
   - Develop a set of open-ended questions to encourage discussion and elicit valuable insights.

2. **During the focus group session**
   - Start with a warm welcome and introduce the purpose of the focus group. Set a comfortable atmosphere.
   - Incorporate a brief icebreaker to help participants feel at ease and foster group dynamics.
   - Practice active listening and use techniques such as probing, paraphrasing, and facilitating open dialogue
   - Ask questions that encourage participants to share their experiences, preferences, and suggestions.
   - Ensure everyone has an opportunity to speak. Encourage shy participants and manage dominant voices.
   - Stick to the agenda and allocate sufficient time for each topic. Keep the discussion focused.

3. **Debrief the session:**
   - Conduct a brief debrief with your team immediately after the focus group to capture initial impressions.
   - Transcribe the focus group session or take detailed notes for later analysis.
   - Identify and summarize the key insights and themes that emerged during the discussion.
   - Analyse the collected data, looking for patterns and trends. Prepare a comprehensive report.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Enhance their ability to actively listen and extract meaningful insights from group conversations. • Develop skills in guiding and facilitating effective focus group discussions. • Learn techniques on how to analyse and synthesize information gathered from focus groups. • Understand how to apply focus group insights to inform design decisions.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Make sure the composition includes varied genders, ages, and educational backgrounds. • Encourage diverse perspectives and participation within focus groups. The goal is to create an inclusive and dynamic discussion environment where the richness of diverse perspectives enhances the quality and depth of insights generated during focus group sessions. • Emphasize the role of a clear and unbiased facilitator in guiding the discussion. • Pay attention to participants' body language and non-verbal cues to understand their reactions. • Be flexible in adapting your approach based on the dynamics of the group and unexpected insights. • Emphasize the importance of confidentiality to create a safe space for open discussion. • To get familiar with the focus group technique you can introduce a role-playing activity where participants simulate a focus group dynamic. Assign each participant a specific role within the focus group, such as a facilitator, a vocal participant, a sceptic participant, etc.

TOOL 16 03_DEFINE_16_PERSONA

ACTIVITY NAME	**Persona**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	A persona is a virtual friend who represents a specific group of people for whom we are designing our solution. It is like a character from a story who has their own characteristics, needs, expectations and aspirations. In the Design Thinking process, we create personas based on research that helps us understand the real picture of a person or group of people. Thanks to them, we can better identify who our users are and what they need. A persona helps us empathise with our users by learning about their daily lives, challenges and goals. It is like a key that opens the door to a better understanding of their needs and preferences. Most importantly, personas set the direction for our design solutions. They serve as a reference point for further stages of the design process, helping us focus on creating solutions that will be truly useful and valuable to our users. We recommend giving your persona a name and following them through the subsequent stages of DT.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To better understand our users or customers through the creation of a persona. • to build the most realistic image of a specific group of users. Thanks to it, we can learn about their needs, expectations and aspirations. It's like creating a portrait of our user to better understand them. • to better understand our users or customers. The more we learn about their needs and preferences, the better we can tailor our solutions. This will make our products or services more useful and attractive to our audience.

EDUCATION ARCHITECTS

16. PERSONA
EDUCATION ARCHITECTS

PERSONAL DATA:
NAME
AGE
CITY/VILLAGE
EARNINGS
FAMILY
OTHER

WHAT OR WHO HAS INFLUENCE ON THEM?

WHO ARE THEY?

WHAT IS THEIR TYPICAL DAY LOOK LIKE?

WHAT MAKES THEM HAPPY?
WHAT MAKES THEM SAD?

INTERESTS

FAVOURITE QUOTE

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Think about who your persona is (30 min):** Think about who will use your solution and how many people in that group might benefit from it. You can create a separate persona for each of these groups.
2. **Conduct interviews or conversations with users (60 minutes):** If possible, conduct interviews or conversations with potential users to gather basic information about their needs, expectations, and daily lives.
3. **Discuss the users with your team (45 min):** If you are unable to conduct interviews, discuss with your team who the users of your solution might be. A joint discussion can help you define the characteristics and needs of your users.
4. **Draw a persona (10 min):** Using the persona matrix, draw your persona. You can use simple drawings or icons to represent your persona's appearance.
5. **Give your persona a name (5 min):** Give your persona a name to make them feel more personal.
6. **Describe the user's demographics (15 min):** Next, describe the user's basic demographics, such as occupation, age, gender, hobbies, etc.
7. **Characterise their needs and expectations (40 min):** Move on to describing your persona's needs, expectations, aspirations and frustrations. This information will help you understand how your solution can impact their life.
8. **Add a motto/quote that characterises the user (15 min):** Finally, you can add a motto or quote that best characterises your user and their approach to life.

Creating personas is a great way to better understand your users and tailor your solution to their needs.

OUTCOMES

By the end of the activity, learners will have gained the ability to accomplish the following:

- An in-depth user profile: You will have a detailed description of who your user is, what their interests and hobbies are, what they do for a living, and what their goals and dreams are. It's like opening a book about your user that will allow you to understand them better.
- A set of basic behaviour patterns: You will learn about the typical behaviours that your persona exhibits in everyday life. These are like patterns that will help you predict how your user might react to your solution.
- A realistic picture of the user: Thanks to the persona, you will have a more realistic picture of what your user looks like. It's like watching a film about their life, which will allow you to better understand their needs and problems.
- A list of user needs: You will have a list of what your persona needs to achieve their goals and realise their dreams. It's like a shopping list that will help you provide them with the right solutions.
- A list of user frustrations: You will also learn about the frustrations and problems your user faces. It's like a map of difficulties that will help you avoid making the same mistakes in your design.

With this information, you will be able to better understand your users and create a solution that truly meets their needs and helps them achieve their goals.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Personas at every stage: Personas can be prepared at any stage of the Design Thinking process. You don't have to wait for a specific moment to start creating personas. They can be useful at every stage of the project.
- Persona as an archetype, not a stereotype: When creating personas, remember that they are not stereotypes, but archetypes. This means that they are a representation of the general characteristics and needs of a group, not individual cases.
- In-depth interviews: To better understand your users, it is worth conducting in-depth interviews with the people for whom you are designing the solution. This will allow you to learn about their lives, needs and expectations first-hand.
- Separate personas for different groups: If your solution is intended for several individuals or groups of people, it is worth preparing separate personas for each of them. Each group may have different needs and preferences that are worth considering.
- Realistic user image: Personas should present a realistic image of the user, not an idealised one. Try to understand their daily lives, challenges and goals in order to better meet their needs.
- Put yourself in the user's shoes: When creating personas, try to put yourself in the user's shoes or look at the problem through their eyes. This will help you better understand the user's perspective and tailor your solution to their needs.
- Remember that personas are a tool to help you better understand your users and design solutions that truly meet their needs.

TOOL 17 03_DEFINE_17_EMPATHY_MAP

ACTIVITY NAME	**Empathy Map**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	The empathy map is a tool that allows the team to delve into both the emotional and rational aspects of our user by visualizing their actions and feelings.
ACTIVITY OBJECTIVES	Once the persona has been created (by using Tool 16: 03_Define_16_Persona), the next step is to define their behaviours, thoughts, and emotions in relation to a specific topic explored during an investigation or focus group. By using the empathy map, the goal is to connect with the user on a deeper level—gaining insights into their needs, feelings, and attitudes. This process helps the team move beyond surface-level observations and understand the user's experience more holistically.

EDUCATION ARCHITECTS

17. EMPATHY MAP
EDUCATION ARCHITECTS

WHAT DO THEY FEEL AND THINK?

WHO ARE THEY?
DESCRIBE IN A GENERAL WAY

WHAT DO THEY SEE?

WHAT DO THEY HEAR?

WHAT DO THEY SAY?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (5 minutes):** The Persona must be brought into the space, and the team should be reminded of all the characteristics that have previously been developed—this serves as a brief review. Depending on the number of people on the team and their involvement in the research, it can be useful and enriching to divide the team to gather information from different perspectives, which can be synthesized at the end.

2. **Creating the empathy map (15 minutes):** On a large sheet of paper, draw a person big enough to include four sections. These sections and suggested placements are:
   - What does the person think? This can be represented by a thought cloud or a brain drawn inside the person's head.
   - What does the person feel? This part can be shown inside the heart area to emphasize the emotional layer both intellectually and visually.
   - What does the person say? This can be drawn as a speech bubble near the person's mouth.
   - What does the person do? This can be written near one of the person's hands.

3. **Filling in the empathy map (60 minutes):** This step involves team reflection on each part of the empathy map. Some questions to reflect on from each section are the following:
   - What does the person think? What are some thoughts the person keeps to themselves? What opinions does the person have on the topic? What past experiences might have shaped these thoughts?
   - What does the person feel? What bothers this person about the topic? How do they behave when discussing it? What would they change about the situation?
   - What does the person say? What do they frequently express? What do others in their life say? Who are the people they listen to or admire?
   - What does the person do? How do they behave? What are their daily routines? What does their lifestyle look like?

4. **Presenting the empathy map (15 minutes):** Once the team(s) have written down all the information on the empathy map, they should present their empathy map to ensure everyone understands and aligns with the outcome. If there are two teams, both shall present and work to consolidate the information into a single map.

It is important to recognize that empathy maps may contain contradictions—that's completely acceptable. One version isn't necessarily more accurate than another; people express themselves differently and each person receives information in diverse ways.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Have a more complete understanding of the persona. Not only what they say but other ways of expression about the topic that can give the team information. • Identify opportunities by having a deeper understanding. • Highlight potential improvements and innovations for the project.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Bring all the information gathered in the empathy phase. Once all the information is put on the four different sections of the map, view for juxtapositions among them as well as things that don't initially make much sense (for example: says one thing but feels another quite opposite). It is key to understand users and learn how, even though they are not being initially coherent, to benefit from this and improve their satisfaction level in both areas. • Empathy maps can be used for one user which, in order to get enough information would have to have long meetings with the same user in order to get the information and be able to fill this out accordingly. They can also be used as aggregated empathy maps, combining various empathy maps about each person therefore getting much more information about the same topic.

TOOL 18 03_DEFINE_18_CUSTOMER_JOURNEY_MAP

ACTIVITY NAME	**Customer Journey Map**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	A Customer Journey Map is a tool used to understand and illustrate the path a customer or user takes while interacting with a solution (product or service). It is a graphical representation of interactions between the customer or user and the company or brand. This tool helps identify areas that need improvement and optimizes processes to increase customer satisfaction.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to better understand the customer's experience in the context of their interaction with the company, product or service, as well as their unique perspectives. • learn about the emotions, needs, goals and behaviours of customers at different stages of their interaction with the company, product or service. • to identify areas where customers or users may experience frustration, difficulties or problems, enabling them to be improved. • to optimise processes and points of contact with customers, eliminating potential barriers and difficulties.

EDUCATION
ARCHITECTS

18. CUSTOMER JOURNEY MAP
EDUCATION ARCHITECTS

STAGES

ACTIVITIES

TOOLS

DIFFICULTIES

WAYS OF COPYING WITH DIFFICULTIES

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:
Introduction: 5 minutes.

Activities: 60 minutes.

1. Before you start creating a customer journey map, define what you want to achieve with it. You may want to understand the customer experience, identify areas for improvement, or tailor your offering to customer needs.
2. Determine which customer group you want to prepare the journey map for. This can be a general customer group or a specific market segment.
3. Divide the entire process of customer interaction with your company, product or service into stages. Standard stages include 'Before', "During" and 'After'.
4. For each stage, identify all points of contact that the customer may have with your company. These can be websites, mobile apps, emails, phone calls, store visits, etc.
5. Based on available data, market research, customer behaviour analysis and any surveys or interviews, gather information about the customer experience at each stage and at each point of contact. Try to understand the emotions, needs, goals and problems of your customers.
6. Prepare a graphical representation of the customer journey map, marking the stages of the journey, activities, tools, difficulties and how the user deals with them. You can also include information about the emotions, needs, goals and problems of customers at each stage.
7. Once you have created the customer journey map, conduct an analysis to identify priority areas for improvement. Then take action to optimise the customer experience and eliminate barriers.

VET teachers /trainers/educators can take the following actions:

1. Before you start creating a journey map define what goals you want to achieve with it. You may want to better understand the student's experience in the learning process, identify areas for improvement in the educational process, or tailor the educational offer to the needs of students.
2. Determine which group of students you want to prepare the journey map for. This can be a general group of students or a specific segment, such as students learning a particular profession.
3. Divide the entire process of student interaction with your educational institution into stages. Standard stages may include 'Before starting learning', 'During learning' and 'After completing learning'.
4. For each stage, identify all points of contact that a student may have with your educational institution. These could include classroom lessons, an e-learning platform, conversations with career advisors, work placements, final exams, etc.

5. Based on available data, market research, student behaviour analysis and any surveys or interviews, gather information about the student's experience at each stage and at each point of contact. Try to understand the emotions, needs, goals and problems of the students.
6. Prepare a graphical representation of the student's journey map, marking the stages of the journey, activities, tools, difficulties and how the student copes with them. You can also include information about the students' emotions, needs, goals and problems at each stage on the map.
7. Once you have created the student journey map, conduct an analysis to identify priority areas for improvement. Then take action to optimise the student experience and eliminate any difficulties.

OUTCOMES

By the end of the activity, learners will have gained the ability to enhance:

- Knowledge of the points of contact between the customer or user and the company or its product. The map identifies where and how the customer interacts with the company or product, allowing you to focus on key customer service points.
- Knowledge of the barriers, difficulties and problems that the customer may encounter (which is important for their elimination).
- Knowledge of areas that need to be improved or optimised.

For example, when preparing a student *Journey Map* in the vocational education sector, you will have:

1. Knowledge of the points of contact between the student and your educational institution: The map identifies where and how the student comes into contact with your institution, allowing you to focus on key points of student service, such as practical lessons, theoretical classes, e-learning platforms, career guidance, etc.
2. Knowledge of the barriers, difficulties and problems that students may encounter: The student journey map helps identify potential obstacles to education, such as difficulties in accessing educational materials, lack of support from teachers or difficulties in finding work placements. This is important in order to eliminate them and improve the student experience.
3. Knowledge about areas that need to be improved or optimised: With a student journey map, you can identify areas that need improvement or change, e.g. by better tailoring educational materials to students' needs, increasing the availability of educational support or improving communication between students and teachers. Optimising these areas will increase student satisfaction and the effectiveness of the teaching process.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- The customer journey map should be developed from the customer's perspective, not from the company's perspective. Try to understand and take into account the emotions, needs and goals of customers at every stage of their interaction with the company.
- Use a variety of information sources, such as market research, surveys, interviews, customer data analysis and observations, to get a comprehensive picture of the customer experience.
- The customer journey map should be presented graphically to facilitate understanding and team communication. It is worth using diagrams, post-it notes or data visualisation software.
- Keep in mind the emotions of the customer or user at every stage of the journey. Understanding emotions helps to better tailor the company's actions.
- It is worth identifying areas where customers or users may experience problems or frustration (pain points), as well as moments that provide them with positive experiences (wow moments).

Tips for example creating a sample student journey map:

- Student perspective: When developing a student journey map, emphasise the student's perspective rather than that of the educational institution. Try to understand and take into account the emotions, needs and goals of students at every stage of their interaction with the educational institution.
- Use a variety of information sources: To get a comprehensive picture of the student's experience, it is useful to use a variety of information sources, such as surveys, interviews, student data analysis, observations, and feedback from teachers and school staff.
- Graphical representation: The student journey map should be presented graphically to facilitate understanding and team communication. You can use various tools and techniques, such as diagrams, post-it notes, or data visualisation software, to better illustrate the individual stages and points of contact between the student and the educational institution.
- Student emotions: Do not forget about the student's emotions at every stage of the journey. Understanding emotions helps to better tailor the educational institution's activities and respond to students' needs.
- Identify pain points and wow moments: It is worth identifying areas where students may experience problems or frustration (so-called pain points), as well as moments that provide them with positive experiences (so-called wow moments). Identifying these areas will improve the student experience and build positive relationships with the educational institution.

TOOL 19 03_DEFINE_19_VALUE_CANVAS

ACTIVITY NAME	**Value Canvas**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	A value canvas or value map is a tool that helps understand and present how an organisation (delivers value to its customers or stakeholders. It is a graphical representation of a company's or organisation's (including VET Schools) strategy and concept of operation, which defines what constitutes the source of value in the company's activities. The value canvas helps you focus on key areas and deliver value to your customers and stakeholders more effectively. *Here are some ways VET trainers/educators can convey the principles of the value canvas to their students and participants:* 1. Explain the concept of value: The trainer/educator can start with a basic explanation of what values are. This can be described as what is important to us in life, what guides our decisions and behaviours. 2. Introduce the idea of the value canvas: The trainer/educator can explain that the value canvas is a tool that helps an organisation understand how it delivers value to its customers or stakeholders. They can compare it to a map that shows how the organisation achieves its goals. 3. Discuss the main elements of the value canvas: The trainer/educator can go through the main elements of the value canvas, such as value sources, key areas of activity, and improving customer relationships. They can do this in the form of a presentation or class discussion. 4. Practical examples: The trainer/educator can provide practical examples from everyday life or other fields to show how organisations apply the value canvas in practice. The examples can be tailored to the interests and experiences of the learners to make them easier to understand. 5. Practical tasks: The trainer/educator can ask participants to complete simple practical tasks that will help them understand the principles of the value canvas. These can be business simulations, educational games or case studies. 6. Discussion and questions: The trainer/educator can encourage participants to ask questions and discuss the value canvas. This can help participants better understand the concept and application of this technique.

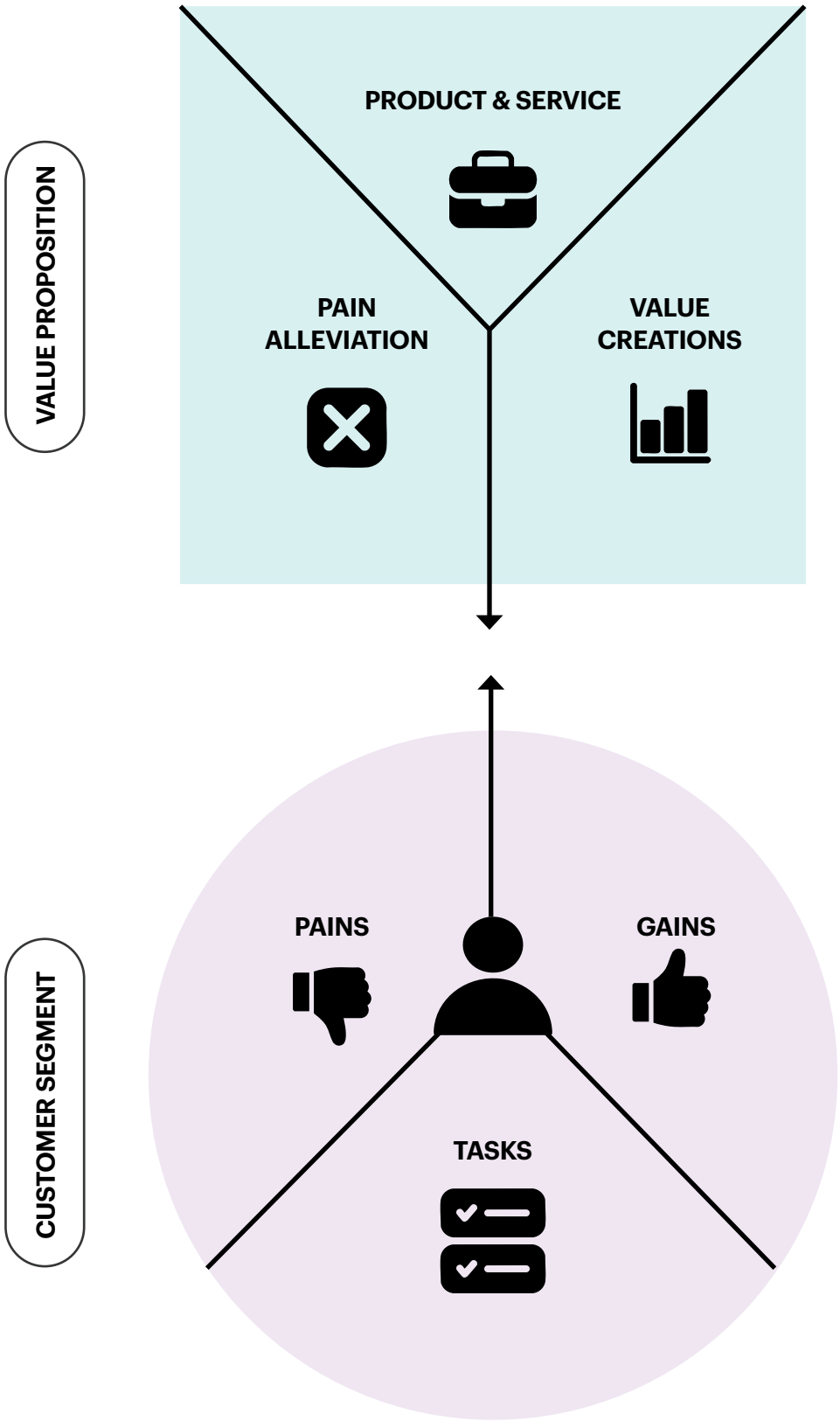
ACTIVITY OBJECTIVES

The main objectives of this activity are as follows:

- to help you understand the sources of value and synchronise actions to deliver the right value to customers or users.
- to identify key areas of the organisation's activities from the perspective of the customer or user and their needs.
- to improve relationships with customers or users.

EDUCATION ARCHITECTS

19. VALUE CANVAS
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Activities: 60 min.

1. Clearly define the purpose of the value canvas: start by explaining that the value canvas is a tool for understanding how an organisation delivers value to its customers or stakeholders. You can emphasise that it can be a tool for understanding the company's strategy, improving processes or communicating with stakeholders.
2. Identify key stakeholders: discuss who the organisation's key stakeholders are, i.e. the people or groups that influence the organisation's value. These may include customers, investors, business partners, employees and other groups.
3. Identify key value drivers: identify the key elements and factors that create value for these stakeholders, such as products, services, innovation, quality, customer relationships, etc.
4. Analyse processes and activities: analyse the processes and activities that are necessary to deliver value, showing what steps the organisation takes to deliver value to its stakeholders.
5. Focus on the customer or stakeholder perspective: start with the customer segment and analyse what benefits and value they receive at each stage of the process.
6. Company perspective: move to the other side of the canvas and focus on the company's perspective, analysing what value the company offers its customers or users and how it responds to their needs.
7. Dependency analysis: help participants understand the dependencies between different elements in the value canvas, identifying where the company's activities align with customer or user needs and where they diverge.

Example: Online education

Company: An e-learning platform offering programming courses

1. Customer profile:

- Tasks to be performed: Users want to acquire new programming skills and improve their professional qualifications.
- Benefits: Users want a flexible schedule, high-quality educational materials, certification upon course completion, as well as satisfaction and fulfilment.
- Problems/Pain points: Users encounter difficulties with self-study, lack of motivation, and low quality of available free materials.

2. Value map:

- Products and services: Online courses with interactive tasks, a discussion forum, and sessions with mentors.
- Benefit creators: High-quality video lessons, course completion certificates, 24/7 access to educational materials, a sense of satisfaction and other positives.
- Problem reducers/Pain relievers: Motivational reminders, access to a learning community, a points and rewards system for progress.

Suggested solutions:

a. **Personalised learning paths**
   Description: Users can choose learning paths tailored to their level of proficiency and professional goals.
   Benefits: Helps users focus on learning the right skills, which increases learning efficiency.

b. **Interactive tasks and projects**
   Description: Courses include interactive tasks and projects that users can complete to better understand the material.
   Benefits: Users can apply their knowledge in practice, which helps to reinforce it.

c. **Mentoring programme**
   Description: Users have access to mentors who can provide advice, answer questions and motivate them to learn.
   Benefits: Helps overcome difficulties with self-study and increases motivation.

d. **Gamification**
   Description: Introduction of a system of points, badges and rewards for learning progress.
   Benefits: Increases user motivation to participate regularly in courses and take on challenges.

e. **Online community**
   Description: Access to an active community of learners where users can share experiences, ask questions and solve problems together.
   Benefits: Promotes a sense of belonging and encourages knowledge sharing between users.

f. **Regular webinars and Q&A sessions**
   Description: Organisation of regular webinars and Q&A sessions with experts from the programming industry.
   Benefits: Users have the opportunity to ask questions live and get answers from experts, which increases the educational value of the platform.

OUTCOMES	By the end of the activity, learners will have gained the ability to acquire: • Key sources of value. The value canvas identifies the main factors or elements that create value for customers and stakeholders, such as products, services, innovations, etc. • Knowledge about processes and activities. The value canvas shows the processes, steps and activities that the organisation undertakes to deliver value, allowing you to understand the stages of production or service delivery. • Knowledge of relationships and dependencies. The value canvas helps to understand the dependencies and relationships between different elements of the company's operations and the customer or user, as well as how changes in one area can affect another. • Knowledge of how to synchronise the company's activities with the needs of customers or users. The value canvas helps to coordinate activities in the area of delivering value to customers or users. • Knowledge about the customer or user perspective. By taking stakeholders into account, the value canvas provides insight into how value is perceived and received by customers or users.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • When preparing a value canvas, focus on the customer or user perspective. Consider how the customer or user perceives the value delivered and what their expectations are at each stage of the process. • Working with the value canvas requires flexibility. The value canvas is not a static tool. It should be updated regularly to reflect changes in the organisation's processes and strategy. • When preparing the value canvas, always start from the customer or user perspective. • The value canvas should be prepared based on reliable data.

TOOL 20 03_DEFINE_20_VALUE_CURVE

ACTIVITY NAME	**Value Curve**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	A value curve is a strategic tool used in business to analyse and compare the product or service offerings of different organisation in the market. It is a graphical representation of how an organisation creates and delivers value to its customers compared to its competitors. The value curve helps to understand how an organisation stands out in the market through its unique features and offerings, as well as how it can compete based on differentiation or costs.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to understand and systematize how an organisation delivers value to its customers compared to competitors in the market. • to develop a strategy that allows for achieving competitive advantage and meeting customer needs. This tool can be used in strategic planning and business decision-making processes. The Value Curve can serve as a strategic or analytical tool for competitiveness analysis. • to support the understanding of customer behaviour and optimize resources. The example below will help you understand better the use of this tool in VET education: *In the context of education, the main objective of preparing a Value Curve is to understand and systematize how a school delivers value to its students compared to other educational institutions.* The goal in education is also to develop a strategy that enables the school to achieve a competitive advantage by better meeting the needs of students. This tool can be used in strategic planning for the school and in making decisions about its operations. The Value Curve can be used as an analytical tool to analyse the competitiveness of the specific school compared to other educational institutions in the region or country. It can also help understand student behaviours, their educational preferences, and optimize the use of school resources to better support the teaching and learning process.

EDUCATION
ARCHITECTS

20. VALUE CURVE
EDUCATION ARCHITECTS

HIGH

DEGREE OF VALUE REALIZATION

LOW

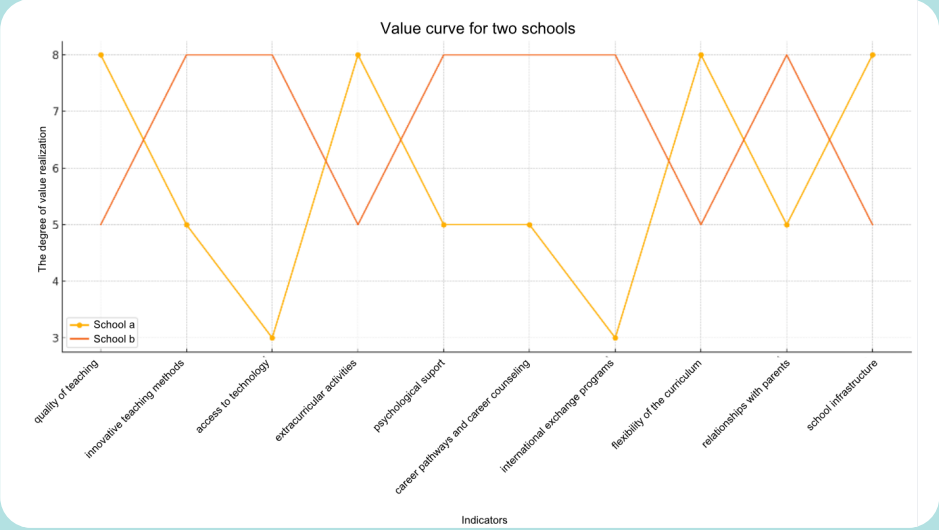
IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction: 10 minutes
Activities: 90 minutes

1. Determine why you are creating a value curve and what your goals are. Is it to be a tool for analysing competitiveness, marketing strategy or change management in your organisation?
2. Consider which specific product or service offering you want to focus on. This could be a specific product, a product line or the organisation's entire offering.
3. Think about which competitors are most important in the market area you are analysing. Focus on those organisations that compete directly with your chosen product or service.
4. Determine what value criteria are important for the area you are analysing. These may include aspects such as price, quality, availability, innovation, customer service, etc., and put them in the diagram (at the bottom)
5. Collect data on the selected value criteria for your product/service and your competitors' products/services. You can use available market information, market research or customer surveys.
6. Enter the data into the chart. For each criterion, determine the level of fulfilment by your competitors and yourself (your organisation). You can use graphical tools such as bar charts to illustrate this.
7. Analyse and interpret the results. Pay attention to areas where your offer stands out positively (values higher than your competitors) and areas where adjustments may be necessary.
8. Based on the value curve analysis, develop an action strategy. Determine how you can leverage your competitive advantages or change your offer to deliver even more value to your customers.

Example relevant for VET sector:
The chart below shows the value curves for two schools, School A and School B, in the context of various education quality indicators. Each indicator is rated on a scale from 1 (low) to 10 (high).



Value curve analysis:
School A excels in teaching quality, extracurricular activities, curriculum flexibility and school infrastructure.
School B is better in innovative teaching methods, access to technology, psychological support, career paths and guidance, international exchange programmes, and parent relations.

Conclusions:
School A:
-It should consider investing in innovative teaching methods and modern technologies to increase its competitiveness.
-Improving psychological support and international exchange programmes could increase its attractiveness to students seeking support and international experience.

School B:
-It could focus on improving the quality of teaching, extracurricular activities and school infrastructure.
-Further flexibility in the curriculum could attract more students seeking personalised educational pathways.

Overall, the use of the value curve helps schools identify their strengths and weaknesses and develop strategies to better meet the needs of their students.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- A list of your organisation's performance criteria that are important to your customers. The value curve shows which value criteria are most important to your customers and which areas are important in competition in a given market. These may be aspects such as price, quality, availability, innovation, customer service, etc.
- Knowledge of competitive differences. Based on the analysis of the value curve, you can identify areas where your organisation stands out positively from the competition (for example, offers higher quality or is more innovative) and areas that need improvement.
- Knowledge about competitive advantages. Information from the value curve can help identify your company's competitive advantages in the market. This can form the basis for developing a competitive strategy.
- Information about priority actions. The value curve allows you to prioritise actions to improve your organisation's offering. It allows you to decide where to invest to increase the value delivered to customers or users.

Based on the example from the VET sector above, once you have prepared the value curve, you will have:

- A list of criteria that are important for your school's activities from the perspective of students, parents and other stakeholders. The value curve shows which value criteria are most important to students and their parents and which areas are important in competition in a given education market. These may be aspects such as the quality of teaching, the availability of additional programmes, the level of satisfaction of students and parents, etc.
- Knowledge about competitive differences. Based on the value curve analysis, you can identify areas where your school stands out positively from other educational institutions (e.g. offers more advanced curricula or better infrastructure) and areas that need improvement.
- Knowledge about competitive advantages. Information from the value curve can help identify your school's competitive advantages in the education market. This can form the basis for developing strategies to attract students and improve the quality of education.
- Information about priority actions. The value curve allows you to prioritise actions to improve your school's offering. It allows you to decide where to invest to increase the value delivered to students and their parents and improve the functioning of your educational institution.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

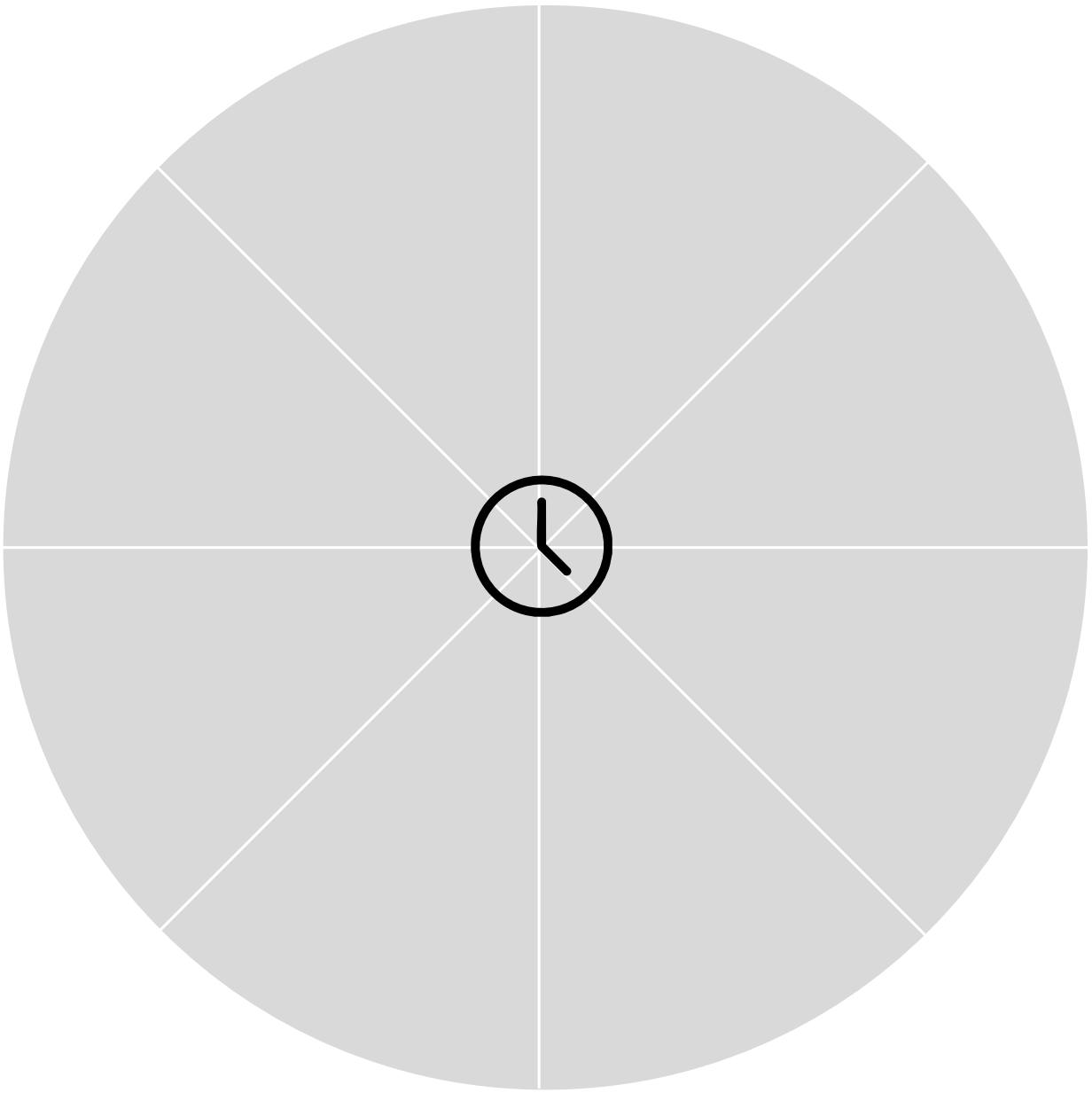
- When specifying the criteria for comparison, make sure that they are well defined, measurable and gradable.
- Data on competing organisations should be presented accurately. It should also be reasonably up to date. This data should be based on actual market information or research.
- It is important to remember that the map should be clear. The value curve should clearly and legibly show the value levels for different criteria.
- When creating a value curve, it is worth thinking about long-term activities. A good understanding of the value delivered to customers and competitors allows an organisation to better adapt to changing market conditions and achieve a competitive advantage.

TOOL 21 03_DEFINE_21_A_DAY_IN_THE_LIFE

ACTIVITY NAME	**A Day in the Life**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	The 'A Day in the Life' tool is often used in design thinking to better understand the perspective and experiences of users. 'A Day in the Life' is one of the key tools used in the early stages of the design thinking process to focus on the user's perspective. 'A Day in the Life' is a simulation of the daily life of a customer or user. Working with this tool involves simulating a typical day or a specific moment in the user's life to better understand their experiences and needs. Based on a persona, scenarios of a typical day or event in which that person participates are created. These scenarios cover the various stages and interactions that take place during the day.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to better understand the perspective and experiences of users. The 'A Day in the Life' tool helps designers get closer to their users, which is crucial in a customer- or user-centric design process. • to immerse yourself in the daily life and routine of your customers or users to better understand their needs, build empathy, identify barriers and problems, and design a solution that is closely focused on the needs of your customers or users.

EDUCATION
ARCHITECTS

21. A DAY IN THE LIFE
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction (15 min): Select a user persona that is representative of the target group being studied.
Activities: 60 min:

1. Define the specific goal you want to achieve by preparing 'A Day in the Life'. Consider whether you want to understand the user's daily routines, problems, needs or other aspects.
2. Select the scenario of the day or event you want to reconstruct. This could be a typical day for the user or a specific situation in which the user uses the product or service.
3. Make a list of the user's points of contact with the product or service during the selected scenario. These could be moments of purchase, use, customer service, etc.
4. Create a detailed scenario of events with a description of the user's actions, interactions and emotions at each stage. Describe what problems may arise and what their needs are.
5. Simulate or role-play the selected scenario. Carefully analyse each step of the customer or user and plot it on a diagram.
6. After the simulation, analyse the collected data and observations. Identify problems, needs and opportunities for improvement based on the user experience.
7. Based on the test results, develop specific actions and strategies to tailor the product or service to the needs of users.

Example: E-learning service 'A day in the life of'

1. Selecting a user persona
Persona: Marta Kowalska
Age: 28
Occupation: Marketing specialist
Education: Master's degree in management
- Goal: To develop programming skills to enhance her professional qualifications and career opportunities
- Preferences: Flexible learning schedule, high-quality educational materials, possibility of obtaining a certificate

2. Defining the goal
Goal: To understand Marta's daily routines, problems and needs related to using the e-learning platform.

3. Select a scenario for the day
Scenario: A typical day for Marta using the e-learning platform (note: can be broken down into specific activities for each time of day)

4. List of user touchpoints with the product
- Morning: Check the schedule for the day and plan learning sessions
- Before noon: Participating in online lessons during a break at work
- Afternoon: Using educational materials while commuting home
- Evening: Solving interactive tasks and participating in a session with a mentor
- Late evening: Reviewing progress and planning next steps

5. Scenario simulation
Simulation of a typical day in Marta's life, played out with a detailed analysis of each step and interaction with the e-learning platform.

6. Analysis of collected data
- Problems: Lack of synchronisation with the calendar, no offline option, difficulty concentrating, lack of real-time support, difficulty monitoring long-term progress.
- Needs: Calendar integration, ability to download materials, better optimisation of the mobile app, more interactive tasks, detailed progress reports.

7. Development of actions and strategies
- Product adaptation: Introduction of calendar synchronisation, ability to download materials for offline use, better optimisation of the mobile app.
- User support: Expand mentoring features, introduce more interactive tasks.
- Progress monitoring: Creation of detailed progress reports and recommendations for users.

By using the 'A Day in the Life' activity, you can gain a thorough understanding of users' daily routines, problems and needs, enabling you to better tailor your products and services to their expectations.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- Detailed user characteristics. The tool allows you to create a detailed description of the user persona, including information such as age, gender, life goals, challenges, preferences, and other characteristics.
- Scenarios and stages of the day or event. 'A Day in the Life' allows you to understand how a customer or user spends a typical day, or a specific event related to a product or service. This includes various stages and interactions.
- Knowledge of problems and challenges. The tool identifies problems that the user may encounter during their daily activities and the challenges they may face.
- Information about emotions and reactions. 'A day in the life' helps to understand the emotions that a customer or user experiences during various interactions with a product or service.
- The perspective of the customer or user. 'A day in the life' allows you to understand how the user perceives the product or service and what their expectations are.
- Knowledge about the needs of the customer or user. 'A day in the life' reveals the user's main needs and what is most important to them in the context of the product or service.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- When preparing 'A Day in the Life,' it is important to choose the right persona. The user persona should be representative of the target group.
- Work with 'A Day in the Life' should be based on reliable information about customer or user behaviour. If possible, it is worth conducting live observations or using reliable data sources.
- When using the 'Day in the Life' method, stick to the perspective of the customer or user and their personal characteristics and context that have a significant impact on the use of a given product or service. The simulation of a day in the life should be based on empathy towards the user, identification with their needs, emotions and problems.
- When working with 'A Day in the Life,' ethical principles should be followed, especially if the simulation uses data and involves interactions with real users.

TOOL 22 03_DEFINE_22_MOSCOW_PRIORITIZATION_MATRIX

ACTIVITY NAME	**MoSCoW Prioritization Matrix**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	The MoSCoW matrix is a tool used in project management to prioritise tasks, features or project requirements. The MoSCoW matrix helps project teams clearly identify which elements are most important and focus on them to achieve project success. It is a useful tool in situations where resources or time are limited, and it is necessary to choose what is essential to meet project objectives. The acronym MoSCoW refers to four priority categories: • Must-Have: elements of the project that are absolutely necessary for its success. • Should-Have: elements that are important but not critical. • Could-Have: elements that are welcome but not necessary. • Won't-Have: elements that are considered unnecessary in the current project.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to help project teams and stakeholders clearly prioritise tasks, features or project requirements. • The MoSCoW matrix allows you to answer the question of which elements of the project are most important and necessary for its success, and which can be considered optional or less important. • to practice prioritisation, i.e. determining which elements of the project are a priority and which can be postponed or considered at a later stage. This allows project teams to focus their efforts on key tasks. • to facilitate communication between the project team and stakeholders by helping to clearly explain which aspects of the project are critical. • The MoSCoW matrix is also used for risk management. By identifying 'Must-Have' elements as essential for success, the MoSCoW matrix helps project teams identify and manage risk by focusing on key tasks.

EDUCATION
ARCHITECTS

22. MOSCOW MATRIX
EDUCATION ARCHITECTS

MUST HAVE

SHOULD HAVE

COULD HAVE

WON'T HAVE

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Assemble a project team. Everyone on the project team who is responsible for managing the scope of the project and setting priorities should work with the MoSCoW matrix.
2. Define the project objectives (15 minutes). Make a clear list of the project objectives. Explain what you want to achieve and why it is important.
3. Make a list of tasks, functions or requirements (30 min). Identify all tasks, functions or requirements that are related to the project. Make sure they are described in a clear and detailed manner.
4. Prioritise all tasks in the project (20 min). Assign tasks or requirements to one of the four categories of the MoSCoW matrix: Must-Have (M), Should-Have (S), Could-Have (C), Won't-Have (W).
5. Discuss the priorities with the project team (20 min). Consider what is critical and what can wait.
6. Label each task, feature, or requirement in the appropriate MoSCoW category (15 min). You can use the letters M, S, C, and W to label them as 'Must-Have,' 'Should-Have,' 'Could-Have,' and 'Won't-Have.'
7. Analyse the MoSCoW matrix and make sure that the entire project team agrees on the priorities (30 minutes). If there are any differences of opinion, resolve them during the discussion stage.

Below you can find an example of using the MoSCoW matrix in vocational education (field of study: food and catering technical-specialized)

Context:
Students are to prepare a one-day event – 'World Cuisine' – during which they will serve dishes from different countries as part of a practical skills test.

Project objective:
To organise a one-day international food tasting event, using the students' knowledge and skills in planning, preparing dishes, customer service and kitchen organisation.

Identified requirements:
- Setting the menu (at least 3 world cuisines)
- Preparing a list of ingredients
- Purchasing food products
- Student work schedule
- Establishing food serving areas
- Printing menu cards and allergen labels
- Decorating the room (e.g. country flags, cultural accents)
- Documenting the event on the school's social media

Priorities according to MoSCoW:

1. Must-Have (M):
- Establishing the menu
- Preparing a list of ingredients
- Purchasing food products
- Student work schedule

2. Should-Have (S):
- Food serving areas
- Allergen labels
- Menu cards

3. Could-Have (C):
- Themed decorations
- Photos and posts on social media

4. Won't-Have (W):
- Cooking demonstration with a guest chef (too expensive and logistically difficult)

Benefits of using the MoSCoW matrix:
- Students learned how to plan resources and work under time pressure.
- Chaos in shopping was avoided – the focus was on what was necessary.
- The project did not turn into a festival of unnecessary attractions at the expense of functionality.

OUTCOMES	By the end of the activity, learners will have gained the ability to acquire: • An organised list of priorities. The MoSCoW matrix shows which project elements are classified as 'Must-Have' (M), 'Should-Have' (S), 'Could-Have' (C) and 'Won't-Have' (W). This classification clearly defines what is most important and what can wait. • Knowledge of project requirements. The MoSCoW matrix helps you clearly understand which project requirements are critical and which are optional. This avoids confusion during project implementation. • Set a priority list. The MoSCoW matrix allows the project team and stakeholders to prioritise the tasks to be performed. This facilitates planning and resource management. • A basis for monitoring project progress. The MoSCoW matrix serves as a basis for monitoring project progress, allowing you to assess whether the project has been managed in accordance with the established priorities.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • When preparing a MoSCoW matrix, be precise. Make sure that tasks, functions or design requirements are described in a precise and unambiguous manner. Avoid generalisations. • The entire project team should be involved in creating the MoSCoW matrix. This helps to obtain a more complete picture of priorities. • The final result of working with the MoSCoW matrix should be accepted by all members of the project team. The same applies to project stakeholders. • When preparing the MoSCoW matrix, it is worth avoiding excessive focus on 'Must-Haves'. Too many items in this category can render the matrix useless. • The MoSCoW matrix should be consistent with the project schedule. It is worth ensuring that the priorities indicated correspond to deadlines and resource availability. • The MoSCoW matrix should be treated as support in the design process. It is important that the MoSCoW matrix is used as a tool to assist in project management, rather than as a tool to cause confusion or limit creativity.

TOOL 23 03_DEFINE_23_360_PERSPECTIVE

ACTIVITY NAME	**360º Perspective**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	This activity provides a method to support the field visit by narrowing the perspective while observing and understanding how different social, physical, cultural, and emotional aspects affect users and the scenarios in which they operate.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to predefine the lenses through which to observe and understand users and their contexts, in order to focus the research—either by considering all factors or concentrating on the selected ones.

EDUCATION ARCHITECTS

23. 360º PERSPECTIVE
EDUCATION ARCHITECTS

PHISICIAL WHERE DID THE OBJECT OF STUDY CHOOSE TO MEET?	**PHISICIAL** DESCRIBE WHAT YOU SEE OF THE OBJECT OF STUDY	**SOCIAL** WHO ARE PART OF THE OBJECT'S OF STUDY CLOSE CIRCLE?	**SOCIAL** HOW DOES THE OBJECT OF STUDY REACT TO [RELEVANT AREA]?	**CULTURAL** WHERE IS THE OBJECT OF STUDY FROM ORIGINALLY?
CULTURAL WHAT IS A "NORMAL" DAY IN THE OBJECT OF STUDY'S LIFE??	**EMOTIONAL** HOW DID THE OBJECT OD STUDY REACT TO THE FOLLOWING?	**EMOTIONAL** HOW DOES THE OBJECT OF STUDY FEEL BEFORE/ AFTER THE CONVERSATION?		

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction (10 minutes):
- Explain the purpose of the activity: to limit the observation field during the field visit.

2. Explain the possible scenarios to do research in (30 minutes):
In order to define the observation fields, it is very important to agree upon the same language and where each situation could fit before going on the field visit. The four possible factors are the following:
- Physical: the material aspect of the object of study: all the tangible aspects of the situation.
- Social: the relational aspect of the object of study, interrelations and interactions.
- Cultural: the cultural aspect of the object of study: context framed in variables of space and origin.
- Emotional: psychological/interpretational aspect of the object of study: interpretations of sensations perceived or provoked.

3. Preparing a template (30 minutes):
- Prepare a template (or adjust the attached) to gather information, categorize and classify the four main factors to analyse how people relate to the object of study (products/scenarios/problem/service).
- It is important at this point to agree on situations the team may preview or expect and figure out where or how to register them.

4. Organizing (45 minutes):
After the field visit all the information gathered will be organized and synthesized in order to see an effective global perspective of the object of study. Gather then participants for a debriefing session.

5. Insights and Ideation (20 minutes):
- Based on the results the team may have recorded and find relevant to share, each person on the team shall share relevant information and insights gained from the field visit.

Thank everyone for their participation and contributions.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Gain deeper insights into users while also enriching and structuring the information-gathering process. • Understand that conducting this activity before field research has the added advantage of preventing the team from feeling overwhelmed or collecting random information—a common issue in such practices, where everything may seem relevant to understanding the object of study.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • During the 360º Perspective activity, which will be ideally shared with a field visit (Tool 24: 03_Define_24_Field_research), capture photos, videos and notes to analyse the holistic behaviour of users. **Example Summary of the 360º Perspective activity in the VET Sector:** **Objective:** To improve the quality and engagement of training programs in the VET sector. **Field Visit Observations:** Physical: • The workshops are well-equipped but lack modern technological tools. • Training rooms are spacious but not always utilized effectively. Social: • High level of interaction between students and trainers, though sometimes dominated by a few individuals. • Collaborative projects among students foster teamwork but need better facilitation. Cultural: • Diverse cultural backgrounds influence learning styles; some students prefer practical tasks over theoretical. • Cultural differences occasionally lead to misunderstandings in group work. Emotional: • Students show higher engagement during hands-on activities. • Some students express frustration with outdated teaching methods. Insights: • Modernizing tools and equipment could enhance the training experience. • Better facilitation and inclusive practices could improve group dynamics and learning outcomes. • Adapting training methods to accommodate cultural diversity could lead to higher engagement and satisfaction. Ideas: • Introduce more interactive and technology-based learning modules. • Implement training sessions for trainers on managing cultural diversity and inclusive practices. • Design flexible training programs that balance practical and theoretical learning according to student preferences.

TOOL 24 03_DEFINE_24_FIELD_RESEARCH

ACTIVITY NAME	**Field research**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	It consists of a field study in which researchers come into direct contact with the people, places and events they are studying.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to fully immerse yourself in the environment where the problem started or is taking place, or where the challenge is identified. The truth is outdoors, not in the classroom or our offices. Let's be where the action happens. • to immerse participants in the context of the problem or challenge they are addressing, fostering empathy and generating insights that might not be apparent from a distance.

EDUCATION ARCHITECTS

- Transportation (if visiting an external location)
- Notebooks or digital devices for note-taking
- Cameras or smartphones for capturing observations (optional)
- Design Thinking Canvas or similar framework (optional)
- Interview guide (if conducting user interviews during the visit)

DEFINE

24. FIELD RESEARCH
EDUCATION ARCHITECTS

SCENARIO:
WHAT IS THE SCENARIO?

GOAL:
WHATDO YOU WANT TO OBSERVE?
WHAT DO YOU WANT TO LEARN?

OBSERVATIONS:

WHAT HAVE YOU DISCOVER YOU DIDN'T KNOW?

WHAT DO YOU THINK YOU MISSED?

WHAT HAD STRUCT YOU?

AFTER THE FIELD VISIT, WHERE WOULD YOU LIKE TO GO FURTHER, WHAT QUESTIONS DO YOU STILL HAVE?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Pre-Visit Preparation (15 minutes):

- Introduce the purpose of the field visit and the problem or challenge it aims to address.
- Provide background information and context to participants to familiarize them with the visit objectives.
- Discuss logistics, including transportation, schedule, and any necessary equipment.

2. Setting Objectives (10 minutes):

- Define clear objectives for the field visit, such as understanding user needs, observing behaviors, or gathering specific insights.
- Encourage participants to articulate their expectations and what they hope to learn from the experience.

3. Field Visit (2-4 hours):

- Conduct the field visit, immersing participants in the environment related to the problem or challenge.
- Encourage active observation, note-taking, and interaction with users or stakeholders.
- Optionally, conduct user interviews or informal conversations to gather insights directly from the people involved.

4. Debriefing (30 minutes):

- After the field visit, gather participants for a debriefing session to share observations and insights.
- Use prompts to guide the discussion, such as:
- What did you observe during the field visit?
- What surprised you or stood out the most?
- What challenges or pain points did you identify for the users/ stakeholders?
- What opportunities for improvement or innovation did you notice?
- Capture key observations on a whiteboard or flip chart.

5. Solution Prototyping (30 minutes):

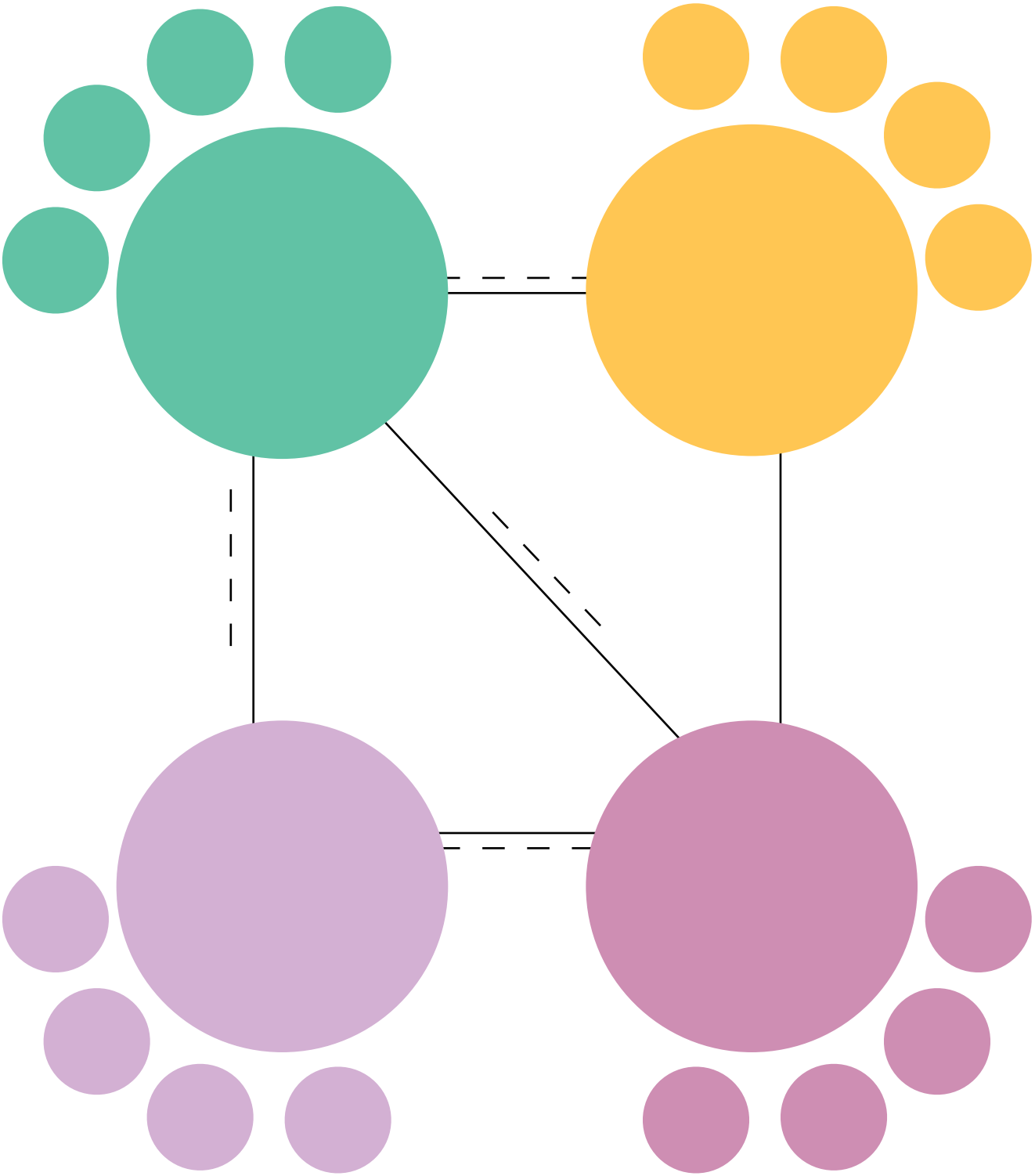
- In small groups, prototype solutions inspired by the ideas generated during the debriefing phase
- Participants can sketch out their prototypes on paper or use materials to create low-fidelity prototypes.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Demonstrate empathy by engaging directly with real-world contexts and users. • Gather firsthand insights through structured field observation and contextual immersion. • Apply design thinking methods from preparation to prototyping and reflection. • Generate innovative and user-centred solutions based on real experiences and observations. • Reflect critically on their learning journey and the challenges encountered during the process.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Encourage participants to document their observations and insights through photos, videos, or audio recordings during the field visit. • Provide structured observation templates or prompts to guide participants in capturing relevant information. • Consider inviting stakeholders or experts to accompany the group during the field visit for additional perspectives.

TOOL 25 03_DEFINE_25_ERAF_SYSTEM_DIAGRAMS

ACTIVITY NAME	**ERAF system diagrams**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	**ERAF (Environment, Resources, Actors, and Functions)** system diagrams are a tool used in design thinking to analyse complex systems and understand the relationships between different elements within those systems.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to understand in a visual way the functioning of a system. • to reflect from an external perspective on all the elements that make up a system and the interactions between them. This activity facilitates the use of a technique in which entities, relationships, attributes and flows present in the system are analysed through an organised system of diagrams.

25. ERAF SYSTEM DIAGRAMS
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to ERAF System Diagrams (15 minutes):
- Explain the purpose and utility of ERAF system diagrams in design thinking.
- Provide examples of how ERAF diagrams can help analyse systems, such as transportation networks, ecosystems, or organizational structures.
- Briefly introduce the ERAF framework (Environment, Resources, Actors, Functions) and its components.

2. Define the System of Interest (10 minutes):
- Identify the system or problem domain that participants will analyse using ERAF diagrams

3. Environment Analysis (20 minutes):
- Begin with the "Environment" component of the ERAF framework.
- Facilitate a discussion to identify and map out the external factors and influences that impact the system.
- Encourage participants to consider both physical and socio-cultural aspects of the environment.

4. Resources Analysis (20 minutes):
- Move on to the "Resources" component of the ERAF framework.
- Guide participants in identifying and categorizing the resources available within the system, such as materials, funding, expertise, or technology.
- Encourage participants to consider both tangible and intangible resources.

5. Actors Analysis (30 minutes):
- Focus on the "Actors" component of the ERAF framework.
- Facilitate a discussion to identify and map out the stakeholders, organizations, or entities involved in the system.
- Encourage participants to consider the roles, relationships, and motivations of each actor.

6. Functions Analysis (30 minutes):
- Conclude with the "Functions" component of the ERAF framework.
- Guide participants in identifying and categorizing the key functions or activities performed within the system.
- Encourage participants to consider both primary and supporting functions.

7. Synthesis and Insights (20 minutes):
- After completing the ERAF diagram, facilitate a discussion to synthesize insights and observations.
- Use open-ended questions to explore the relationships and interdependencies between the components of the system.
- Encourage participants to identify patterns, gaps, or opportunities for improvement.

- Based on the insights from the ERAF analysis, conduct a brainstorming session to generate innovative solutions or interventions.
- Encourage participants to consider how the identified insights can inform the design of solutions that address the needs and challenges within the system.

8. Reflection and Wrap-Up (15 minutes):

- Facilitate a final reflection on the ERAF analysis and the solutions generated.
- Ask participants to share what they've learned and how they can apply these insights to future design projects.
- Thank everyone for their participation and contributions.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- analyse complex systems, identify key components and interdependencies, and generate insights for innovative solutions.
- explore and understand the dynamics of various systems, empowering participants to design interventions that address real-world challenges effectively.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Provide examples or case studies of ERAF system diagrams to illustrate different applications and approaches.
- Use digital tools or software for creating and visualizing ERAF diagrams if conducting the activity remotely.
- Consider inviting domain experts or stakeholders familiar with the system to provide insights and perspectives during the analysis.

Below you will see an example of how an ERAF diagram applied to the VET sector could be structured.

Environment

This component of the diagram describes the context in which the VET system operates. It includes external factors that influence the system, such as:

- Educational Policies: Legislation, regulations and government policies that regulate VET education.
- Demographics: Characteristics of the student population (age, gender, socioeconomic origin).
- Technological Evolution: Impact of technology on teaching methods and labour market demands.
- Labor Market: Needs and demands of industries employing VET graduates.
- Society: Values, expectations and needs of the community regarding VET.

Resources
This component refers to the assets that the system uses to fulfil its functions. In the context of VET, these may include:

- Infrastructure: Buildings, workshops, laboratories and technological equipment.
- Human Resources: VET teachers, trainers, coaches, administrative staff, guidance counsellors and principals.
- Didactic Material: Textbooks, e-learning platforms, simulators, educational software.
- Financing: Government budget, scholarships, grants and private financing.
- Knowledge and Experience: Skills and competencies acquired by teachers and students.

Actors
Actors are the individuals, groups or institutions that interact with and affect or are affected by the system:

- Students: Those who receive training and prepare to enter the labour market.
- Teachers: Professionals who impart knowledge and train students in specific competencies.
- Administrators: Personnel who manage VET institutions, coordinate resources and ensure compliance with regulations.
- Companies: Organizations that collaborate with VET by offering internships, scholarships, and employment to graduates.
- Government: Government entities that regulate, finance and supervise the education system.
- Families: Provide emotional and financial support and make decisions about their children's education.
- Social Organizations and NGOs: May be involved in support programs, guidance, and promotion of VET.

Functions
This component focuses on what the system does, i.e., its key processes and activities:

- Teaching and Learning: Process of imparting and acquiring knowledge and skills.
- Assessment and Certification: Processes of continuous assessment, testing and certification of acquired competencies.
- Guidance and Counselling: Vocational guidance and emotional support services to students.
- Relationship with Companies: Collaboration with the business sector for professional internships and job opportunities.
- Pedagogical Innovation: Development and implementation of new teaching and learning methods, adapted to market needs
- Administrative Management: Processes of planning, organization and administration of the system's resources and activities.

Visual Example to illustrate this ERAF diagram:

Environment: can be represented as the external framework surrounding the system.
Resources: Placed in the centre, showing the key elements that feed the system.
Actors: Located around the resources, showing their interaction with them.
Functions: Represented as processes that connect actors and resources, flowing towards specific objectives.

This visual scheme allows understanding how each component influences the Vocational Training system, identifying key relationships and possible areas for improvement or intervention.

TOOL 26 03_DEFINE_26_IN_AND_OUT

ACTIVITY NAME	**IN and OUT**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	This activity is a visualization tool practiced in groups to understand and agree on the limits and boundaries within a project.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to create a dynamic activity to quickly visualize and align the team's goals and shared understanding. • to set boundaries and establish the nature of the project. It is one of the main "to do" steps when starting a project of any kind. • to identify both the inside and reachable aspects (the "Ins") and the outside or unreachable aspects (the "Outs") of a particular situation, problem, or idea. • to encourage balanced thinking that can lead to more comprehensive insights.

EDUCATION
ARCHITECTS

26. IN AND OUT
EDUCATION ARCHITECTS

IN(SIDE)

OUT(SIDE)

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction (10 minutes):

- Explain the purpose of the activity: to identify both the inside/reachable aspects ("Ins") and the outside/unreachable aspects ("Outs") of a given topic.
- Provide examples to illustrate the concept of "Ins" and "Outs" in different contexts.

One example might be this. Suppose we are working on a specific project with a young immigrant population. Our project would include aspects related to the following:
INS. Academic accompaniment of students. Emotional accompaniment of students. Scholarship systems. Language support. Collaboration with educational authorities.
However, our project would not include the following:
OUT. Aspects related to the social work of their family, social or cultural aspects of the students, administrative aid related to housing or maintenance, religious education, etc.

2. Topic Selection (5 minutes):

- Choose a topic or problem to explore during the activity. This could be a real-world challenge, a product or service, or a creative idea.

3. In and Out Brainstorming (20 minutes):

- Divide participants into small groups or pairs, depending on the size of the group.
- Set a timer and ask each group to brainstorm as many inside aspects ("Ins") and outside aspects ("Outs") of the chosen topic as possible within the time limit. Write the "Ins" inside the circle and the "Outs" outside the circle.
- Each idea should be written on a separate sticky note.

4. Sharing and Clustering (15 minutes):

- Have each group share their ideas with the larger group, placing their sticky notes on the whiteboard or flip chart under the appropriate category ("Ins" or "Outs").
- As ideas are shared, encourage participants to discuss and clarify each point.
- At the end of the activity, there will be a visual map where we will be able to identify what is staying in the project (In) and what is being left out (Out).

5. Synthesis and Ideation (20 minutes):

- Based on the insights gained from the "In and Out" activity, conduct a brainstorming session to generate ideas for addressing the challenge or improving the topic.
- Encourage participants to build on the included aspects ("Ins") and mitigate or overcome the excluded aspects ("Outs").

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Explore both reachable and unreachable aspects of a topic or problem, leading to deeper insights and more holistic solutions.
- Encourage balanced thinking and foster collaboration among participants to address challenges effectively.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Use a Design Thinking Canvas or similar framework to structure the activity and capture insights systematically.
- Encourage participants to think creatively and consider unconventional or unexpected aspects as both "Ins" and "Outs."
- Consider rotating roles within groups to ensure equal participation and diverse perspectives.

Example taken from the VET sector:
Let's assume that our project is about "how to improve the inclusion of vulnerable people in different vocational training programs", where it is crucial to clearly define the boundaries to ensure an effective approach.

Project Context
The project seeks to promote the inclusion of people in vulnerable situations (e.g., people with disabilities, migrants, people experiencing economic difficulties, etc.) in vocational education and training (VET) programs. The purpose is to ensure that these groups have equal access to and can benefit from the educational and employment opportunities that VET offers.

Working Group
The "In and Out" activity is conducted in a working group that may include:

- Project coordinators.
- Representatives of VET institutions.
- Social organizations and NGOs involved in inclusion.
- Representatives of vulnerable groups.
- Experts in inclusive education.

Activity "In and Out"
The group meets and discusses the elements that they consider should be inside (In) and outside (Out) the scope of the project. Below is an example of how these categories might be defined:

"In" - Within the Scope of the Project

1. Needs Assessment:
- Conducting studies to identify the specific needs of vulnerable groups in relation to VET.

2. Curricular Adaptation:
   - Modification of existing programs and curricula to make them more inclusive and accessible.
   - Inclusion of pedagogical methodologies adapted for people with disabilities.

3. Teacher Training and Sensitization:
   - Training for teachers on issues of inclusion, diversity, and inclusive pedagogical methodologies.
   - Awareness programs on the reality of vulnerable people.

4. Access to Resources and Technical Support:
   - Provision of assistive technologies and teaching resources adapted for students with disabilities.
   - Implementation of tutoring and personalized support for vulnerable students.

5. Inclusion Policies:
   - Development of institutional policies that promote inclusion in VET.
   - Creation of mechanisms to evaluate and monitor the inclusion of vulnerable people in programs.

6. Collaboration with NGOs and Social Organizations:
   - Establishment of partnerships with organizations working on social inclusion to strengthen project actions.

"Out" - Out of Scope of the Project

1. Complete Redefinition of VET Programs:
   - Will not address the creation of new VET programs from scratch, but the adaptation of existing ones.

2. Comprehensive Solution of Socioeconomic Problems:
   - The project will not directly address poverty or general unemployment, but how these factors influence inclusion in VET.

3. General Public Policy:
   - The project will not focus on education reform at the national level, but on specific changes within the context of VET at participating institutions.

4. General Physical Infrastructure:
   - No extensive structural renovations of the physical facilities of the VET institutions are included, except as needed for specific accessibility.

5. Customized Individual Solutions:
   - While support for individuals will be sought, the focus will be on solutions that can be applied generally for vulnerable groups, not on creating comprehensive individualized plans for each person.

This approach allows the team to maintain focus on agreed objectives and manage expectations about what the project can and cannot achieve.

TOOL 27 03_DEFINE_27_DESIGN_OF_SCENARIOS

ACTIVITY NAME	**Design of scenarios**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	The *Design of scenarios* activity includes short and concise questions that once launched provoke the generation of ideas arising from established design principles.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to engage participants in a structured process that fosters creativity, empathy, and collaboration to tackle a specific problem or opportunity. • to empower participants to tackle complex problems or opportunities through a human-centred approach, ultimately driving innovation and positive change.

EDUCATION ARCHITECTS

DEFINE

27. DESIGN OF SCENARIO
EDUCATION ARCHITECTS

SCENARIO:
WHAT IS THE PROBLEM WE ARE TRYING TO SOLVE?

1. INICIAL HMW
HOW MIGH WE....

2. KEY OUTCOMES

3. IMPORTANT ASPECTS OF CONSTRAINS

4. POSSIBLE SOLUTIONS

5. TWEAK THE INICIAL HMW

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to Design Challenge activity (10 minutes):
- Explain the purpose and benefits of this activity
- Provide examples to illustrate how this activity will help.

Example:
It is difficult to give an example of this type of work dynamics, since it includes many nuances that depend on the project. We have to be aware that this tool allows us to start releasing the creative storm, but before that, it is necessary to define what we want to solve. From a general design point of view, we must answer the question "How could we do it...? Colloquially this question is called HMW, we will have to make many HMW. It should be noted that these questions will evolve as the project progresses, they are not static. We must pose many HMW, some very specific, others very broad, but then we must narrow them down. For example, we can have a very specific HMW "create an ice cream that does not drip" but we can also have a broader HMW such as "redesign the dessert". Well, before these two HMW, perhaps we could have an intermediate one "how to redesign the ice cream to make it more portable".

2. Define the briefing (10 minutes):
- Choose the right questions that will help boost creativity to generate solutions.
- Ask yourself "How Must We?" to own the problem and challenge ourselves to find solutions.

3. Set Goals (10 minutes):
- Break down the design challenge statement into specific problem statements or goals that participants will focus on.
- Discuss the desired outcomes and objectives for the design sprint.

4. Ideation (30 minutes):
- Facilitate a brainstorming session where participants generate a wide range of ideas to address the design challenge.
- Encourage divergent thinking and wild ideas, using techniques such as brain writing, SCAMPER, or reverse thinking.

5. Prototype Solutions (30 minutes):
In small groups, prototype solutions based on the selected ideas. Participants can sketch out their prototypes on paper or use materials to create low-fidelity prototypes.

Share the results with the rest of the group.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Tackle complex problems or opportunities through a collaborative and iterative process. • Generate innovative solutions that are grounded in user needs and insights, ultimately driving positive change.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Use a Design Thinking Canvas or similar framework to structure the activity and capture insights systematically. • Consider incorporating role-playing or scenario-based activities to add depth to the empathy-building phase. • Encourage participants to think outside the box and embrace unconventional ideas and solutions.

TOOL 28 03_DEFINE_28_PROBLEM_REFRAMING_TECHNIQUES

ACTIVITY NAME	**Problem Reframing Techniques**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	Problem Reframing Techniques will be involved in activities that highlight the significance of clearly defining the problem space. We will delve into techniques to clearly articulate the problem statement, establishing a strong base for the design activities that follow.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to provide participants a method to clearly identify and express design challenges. • to highlight the importance of a clearly defined problem statement in directing the design process. • to relate the problem definition to the larger context of the defining phase.

28. DESIGN OF SCENARIO
EDUCATION ARCHITECTS

Initiate the process of problem reframing

- Describe the challenge from the user's point of view. What difficulties or needs do they face?
- Analyse the goals and constraints from a business standpoint. Consider technologies that may impact the solution.
- Explore educational goals linked to the challenge (e.g., improving learning outcomes, teaching methods, or integrating educational tech).
- Analyse current practices/tools and their strengths and weaknesses.
- Identify the needs of educators and students related to the challenge, including their specific difficulties and preferences.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

First get an overview of Problem Reframing:
It is essential to provide a comprehensive explanation of problem reframing, emphasizing its role in uncovering new insights and innovative solutions.
Highlight that problem reframing involves looking at challenges from different angles and questioning assumptions.
Here is the different step to problem reframing, provided with an example that is relevant to this target issue:

Example: Increasing the Effectiveness of Vocational Training Programs

1. Define the Initial Problem
Clearly state the current problem in a way that everyone on the team understands.
Example: "Our vocational training programs are not delivering the expected outcomes."

2. Break Down the Problem into Smaller Parts
Divide the problem into more manageable components. Identify the main parts of the problem.
Example: "Low attendance in training sessions," "Lack of participant engagement," "Outdated training materials."

3. Change Perspectives
Consider the problem from the perspectives of different stakeholders. How do students, instructors, and employers view this problem?

4. Reverse Perspective
Instead of "How can we increase the effectiveness of our training programs?", ask "How can we make our training programs even less effective?" This can highlight actions to avoid.

5. Redefine the Problem
Instead of "Our vocational training programs are not delivering the expected outcomes," the problem can be reframed as "How can we better engage participants and update our training materials to meet current market needs?"

6. Creative Brainstorming
Conduct a brainstorming session to generate new ideas and solutions for the reframed problem.

Example: Organize regular workshops with teachers, students, and industry representatives to collaboratively develop and update training programs.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • recognize and reframe design challenges effectively. • adopt a mindset that views problems as chances for exploration and creative solutions.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Actively seek out and consider different viewpoints from various stakeholders, including users, team members, and subject matter experts. • Use diverse perspectives to challenge assumptions and expand the range of possible solutions. • Recognize that problem reframing is an ongoing process that may change as new insights emerge. • Revisit and refine problem statements regularly to ensure they remain relevant and accurate.

TOOL 29 03_DEFINE_29_PROBLEM_STATEMENT_CREATION_THROUGH_POINT_OF_VIEW

ACTIVITY NAME	**Problem Statement Creation through Point of View**
DESIGN THINKING PROCESS PHASE	Define
ACTIVITY DESCRIPTION	The purpose of this activity is to investigate the power of framing problems from a variety of angles to construct problem statements that are specifically targeted.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to provide participants with the tools necessary to formulate problem statements that accurately reflect the perspectives of individual users. • to place an emphasis on the significance of comprehending the requirements of the users while creating problem statements.

EDUCATION ARCHITECTS

29. PROBLEM STATEMENT POV
EDUCATION ARCHITECTS

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction to the session (10 min)**
   Describe the empathy-building activity as a hands-on activity where participants immerse themselves in the daily experiences of users. Introduce the Problem Statement tool as a structured approach for capturing key insights during the activity. Explain the purpose of each quadrant in the Problem Statement tool (Says, Thinks, Feels, Does). Offer guidance on how to use the tool effectively, encouraging participants to observe and document both explicit and implicit aspects of the user experience.
   Example Scenario: Simulate the experience of a person with visual impairments navigating a busy city street.

2. **Preparation (15 min):**
   Give participants blindfolds or glasses and set up a mock street with obstacles. Example: Participants will use blindfolds or special glasses to simulate visual impairments and navigate a setup that mimics a busy street.

3. **Use the Problem Statement (15 min):**
   As participants navigate, use the Problem Statement to note what they experience.
   Example: Understand the difficulties and feelings of people with visual impairments in a real-life setting.

4. **Observe and Record (10 min):** Pay attention to both what users say and their deeper feelings and actions.

5. **Discussion (20 min)**
   After the activity, each group presents their crafted Problem Statement to the plenary. Facilitate a constructive dialogue, encouraging feedback, and fostering mutual learning and collaboration. Discuss the findings with the group to understand user experiences better and think about how to address their needs.

6. **Debate (30 min)**
   Initiate a group discussion on how the Point of View (POV) statements align with the identified needs and experiences of users (students).

Encourage participants to share their observations, challenges, and breakthroughs encountered during the crafting of Problem Statements and POV statements.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Define the problem or goal (20 minutes).** This could be a maths problem that seems too difficult to solve or a time management issue that makes it difficult to organise daily tasks.
2. **identifying sources of analogy (30 min).** Here, we can draw on various areas of life, such as sports, art or science, to find examples that may be similar to our problem. We can also look for inspiration in films, books or even everyday situations.
3. Next, after selecting a few analogies, we need to **analyse** them thoroughly **(20 min).** This means that we need to consider how the characteristics or solutions from these analogies can be transferred to our problem. For example, if we are inspired by a football strategy, we can consider how to apply tactics from this game to solve our task management problem.
4. **Generating new ideas and solutions (30 minutes).** It is important to connect the selected analogies with our problem and try to find creative ways to use them to solve the problem or achieve the goal.

In this way, by using analogical thinking, we can approach our problems in a more creative way and find new, innovative solutions.

Example from the VET sector: Students have difficulty planning hairdressing services – e.g. they do not know how long a particular service will take, what tools need to be prepared, they often forget something, which disrupts the rhythm of work and discourages customers.

Analogous thinking:

We look at industries that require precision and planning. For example:

1. *Gastronomy (fine dining restaurant)*
2. *– There, each dish has a specific preparation time, mise en place (i.e. prior preparation of ingredients) is sacred, and service runs like clockwork.*
3. *Analogous idea: create a 'hairdressing service card' with preparation times, tools needed for each service and a checklist to tick off in front of the customer – like a chef before serving.*
4. *Aviation (aircraft crew)*
5. *– Before each flight, there is a briefing, a checklist and a clear sequence of actions.*
6. *A similar idea: before each service, students conduct a mini briefing – they write down the sequence of steps, check the equipment, assign tasks (e.g. who prepares the wash, who prepares the tools, etc.).*
7. *Theatre (dress rehearsals)*
8. *– Every performance must be rehearsed, everything works on time and according to the script.*
9. *A similar idea: students prepare a script for the service – who enters, what they say, what gestures they make, how they react to delays or difficulties.*

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Learn to craft problem statements with a user-centred point of view, using insights from empathy-building activities. • Capture explicit and implicit aspects of user experiences, building a deeper understanding of user needs. • Refine Point of View statements by synthesizing empathy insights, with group discussions fostering collaborative improvement through diverse perspectives.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Compare maps in groups to share insights. • Create different Problem Statements for various interactive strategies.

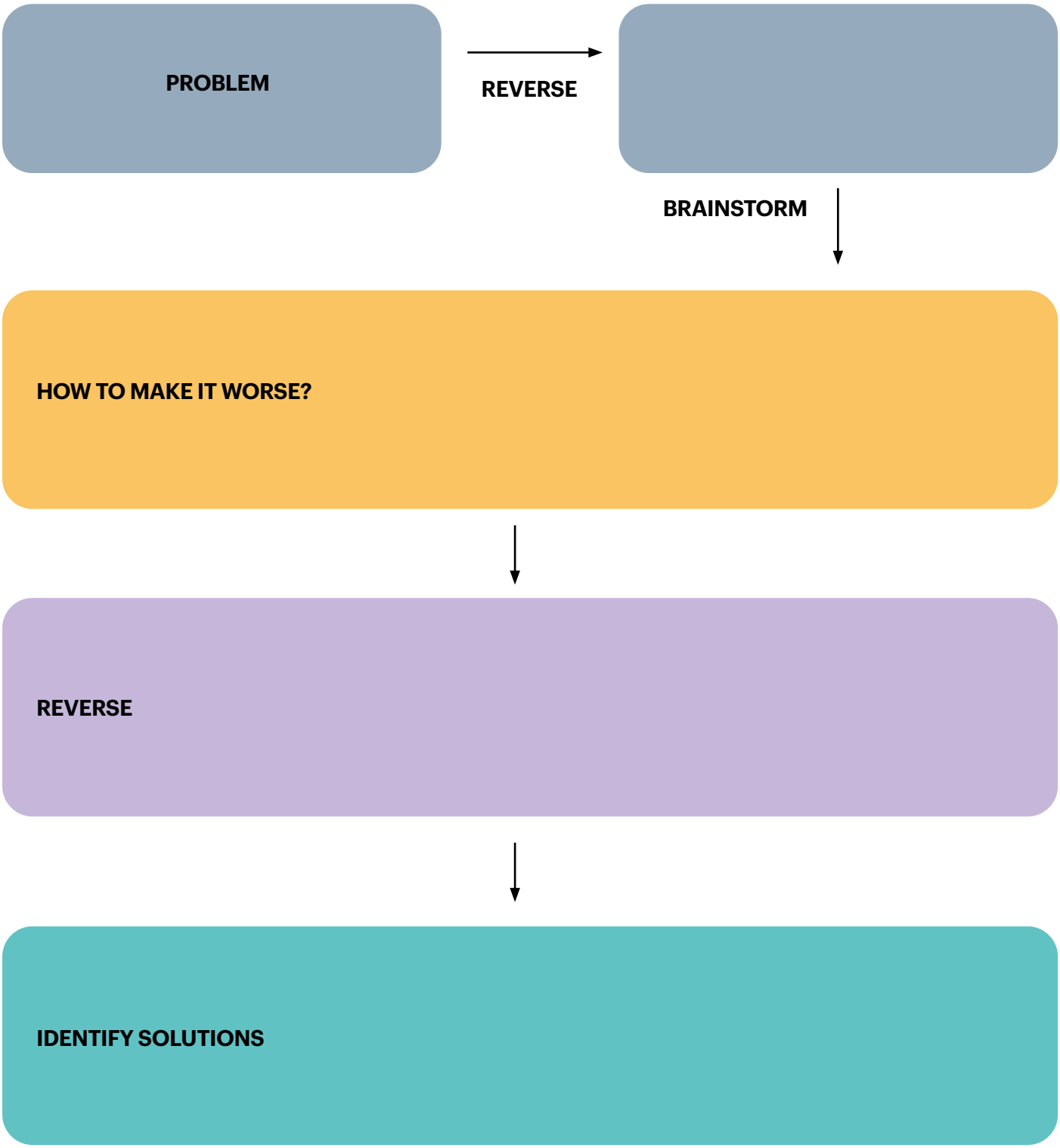
TOOL 30 04_IDEATE_30_REVERSE_BRAINSTORMING

ACTIVITY NAME	**Reverse Brainstorming**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Reverse brainstorming is a creative method which, unlike traditional brainstorming, focuses on solving problems or generating ideas by identifying opposing, non-obvious or controversial perspectives. Reverse brainstorming is an effective tool for breaking down thinking patterns and generating original solutions to problems. It helps to take into account diverse perspectives and think outside the box. Reverse brainstorming reverses standard assumptions or perspectives and, instead of asking how a problem can be solved, asks how it can be exacerbated. Reverse brainstorming requires the ability to look critically at a problem and seek counterarguments or different points of view. *Example: Imagine that traditional brainstorming is like looking for new ideas for organising a school event, for example. But what if we wanted to try something a little more innovative?* *Instead of asking, 'What ideas can we use to make our event successful?', we ask, 'What actions or ideas could make our event the most chaotic or unsuccessful?'* *This tool allows us to focus on things we would normally overlook. Perhaps someone will notice that we don't have enough activities that could surprise or intrigue participants.* *Reverse brainstorming allows us to think outside the box and look at a problem from a different perspective, which often leads to original and innovative ideas.*
ACTIVITY OBJECTIVES	Reverse brainstorming is an adventure in the world of creativity and innovation. When we use this tool, we not only think outside the box, but also engage our imagination in a completely new way. The main goal of reverse brainstorming is precisely to think outside the box. We want to find ideas that are unusual, different from everything we already know. Reverse brainstorming also helps us question accepted norms and beliefs. Sometimes we need to ask, 'Why do we have to do it this way?' – and then we embark on a new path that leads to new and innovative solutions. Reverse brainstorming strengthens our critical thinking. We enter the realm of analysis and ask ourselves, 'Is what we usually consider obvious really the best solution?' This allows us to develop the ability to see things from different perspectives and make more informed decisions.

EDUCATION ARCHITECTS

IDEATE

30. REVERSE BRAINSTORMING
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (10 min).** Traditional brainstorming: Start with the traditional approach. Ask a question or formulate a problem you want to solve. For example, you could ask, 'How can we increase student engagement in the learning process?'

2. **Reverse brainstorming (10 min):** Instead of thinking about how to increase engagement, think about how to decrease it.

3. **Generating opposite ideas (20 minutes):** Encourage participants to generate ideas that are the opposite of those that would be typical in a traditional brainstorming session. Each different perspective can open the door to completely new ideas.

4. **Reversing different ideas (15 min):** Once you have collected different ideas, select the most interesting ones and reverse them to come up with positive solutions to the original problem.

5. **Develop ideas (20 min):** Once you have reversed the ideas, move on to developing them. Look for common elements, innovative concepts and possible solutions.

6. **Analysis (10 min):** Analyse the collected ideas and decide which ones are the most promising. Then test these ideas to see how they work in practice.

7. **Continue the process:** If necessary, repeat the reverse brainstorming to explore different aspects of the problem or analyse different perspectives in more detail. This process can lead to truly innovative solutions.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **A list of ideas for solving the problem:** A collection of diverse ideas, including reverse ones, which can be a starting point for further action.
- **A set of alternative perspectives on the problem and its possible solutions:** Reversing your thinking has allowed you to look at the problem from a different angle, which can lead to non-obvious but effective solutions.
- **An understanding of the context of the problem:** By exploring opposing perspectives, you will better understand the context of the problem and its potential implications.
- **List of potential risks:** When reversing perspectives, you can also identify potential risks associated with different ideas, which will help in their further analysis and management.

These outcomes will be valuable resources in the further process of solving the problem or generating new ideas and can also form the basis for developing specific action strategies.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Ensure diversity among participants: The more diverse the experiences and perspectives of the participants, the more diverse the ideas generated will be. Encourage people from different professions, with different interests and levels of experience to participate.
- Understand the principles of traditional brainstorming: Before starting a reverse brainstorming session, it is a good idea to explain to participants how traditional brainstorming works so that they are clear about the purpose and how it works.
- Encourage the use of reverse logic: During the reversal phase, encourage participants to actively use reverse logic. Help them overcome their natural resistance to negative thinking by directing their attention to finding opposites or reversals of the problem.
- In this phase of divergent thinking, resistance may sometimes arise due to fear of embarrassment or similar issues. To prepare the right environment, it is often suggested to use masks or other accessories that help participants feel more comfortable and energise the activity, avoiding premature value judgements. It is also recommended not to limit possibilities and to focus on the quantity of ideas. The goal should be to initially generate 20-30 ideas that can be filtered out at a later stage. This approach forces the creation of ideas that go beyond trivial and immediate solutions.

TOOL 31 04_IDEATE_31_ANALOGUS_SOLUTIONS_MATRIX

ACTIVITY NAME	**Analogous Solutions Matrix**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Analogous thinking is a way of thinking that involves looking for similarities between different situations, concepts or fields. When we solve a problem using analogical thinking, we look at what we already know and look for ways to use that information in a new way. It's a bit like looking for inspiration in one place to help us understand or solve something completely different. *For example, imagine you are struggling to come up with an idea for a school presentation on renewable energy. You can start thinking analogically, which means looking for similarities between renewable energy and something you already know. Maybe you think about how a car engine uses electricity in a similar way to how a wind turbine uses wind to produce energy. This could give you an idea for an interesting analogy to use in your presentation.* Analogous thinking is not just about finding similarities, but also about understanding how ideas can be adapted or transferred from one field to another. It is a creative way of thinking that helps us look at problems from a new perspective and generate new ideas and solutions.
ACTIVITY OBJECTIVES	Analogus thinking is like a magic key that opens the door to new ideas and solutions. When we use it in the design thinking process, we can approach problems in a creative and innovative way. First, we need to understand what 'analogical' means. It simply means that we look for similarities between different things. For example, if we have a problem designing a better door handle, we can think about how other objects or situations are related to opening and closing, such as opening a window or a bottle. These analogies can help us understand what makes a good door handle convenient and functional. Analogus thinking also helps us look at problems from the user's perspective. Instead of just looking at a problem from our own perspective, we can try to see it through the eyes of other people. For example, if we are designing a new mobile app, analogical thinking might involve considering how different groups of people already use existing apps and what their expectations are. As a result, analogical thinking allows us to think outside the box and opens us up to new possibilities. It enables us to create more innovative and surprising solutions that better respond to the needs of users and the world around us.

EDUCATION ARCHITECTS

IDEATE

31. ANALOGUS SOLUTIONS MATRIX
EDUCATION ARCHITECTS

EXISTING SOLUTION 1	WHAT CAN WE USE?	HOW CAN WE USE IT?
EXISTING SOLUTION 2	WHAT CAN WE USE?	HOW CAN WE USE IT?
EXISTING SOLUTION 3	WHAT CAN WE USE?	HOW CAN WE USE IT?

OUTCOMES	By the end of the activity, learners will have gained the ability to acquire: • A list of ideas for solving your own problem. By analysing analogies, you can discover new ways of thinking and approaching your problem. Analogies can provide inspiration and help generate new and creative ideas for solutions. • Knowledge about innovations and trends. By analysing different fields and examples from other areas, you can identify patterns and trends that may be useful in solving problems. You may discover new technologies, methods or strategies that can be applied in your context. • Knowledge about the context of your own actions. Analogical thinking helps you understand your environment and competitive solutions. You can better understand how your actions fit into a broader context and what opportunities or challenges are available.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Before you start looking for analogies, it is worth carefully analysing the problem or challenge you are working on. The better you understand the context, the easier it will be to find relevant analogies. Understanding the problem will allow you to precisely define the characteristics you should look for in analogies and better match the inspiration you find to your own context. • When using analogical thinking, it is worth drawing on a variety of sources of inspiration. Analogies should relate to different areas and solutions. The more diverse the sources, the more diverse and innovative the analogies you can find. Drawing on different fields allows you to introduce diversity and freshness into the idea generation process. • When selecting inspirations, choose those that can be described in detail. Having broader knowledge about the selected inspirations has a positive impact on the number and quality of ideas generated. The better you understand the inspiration, the more you can extract from it and apply it more effectively in your context. • When using analogical thinking, it is important to be aware of its limitations. Not all analogies will be suitable for every problem. It is worth remembering this and using a variety of sources of inspiration and the best examples. It is also important to skilfully adapt the analogies you find to your own problem, being aware of their limitations and context.

TOOL 32 04_IDEATE_32_PYRAMID_OF_ASSOCIATIONS

ACTIVITY NAME	**Pyramid of Associations**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	The Pyramid of association is a tool or technique that helps generate new ideas and concepts by connecting different aspects or associations related to a problem or design challenge. It is a creative process that encourages thinking 'outside the box' and using associations to create innovative solutions. The association pyramid helps develop creativity and opens the door to discovering new, unexpected solutions. It is a tool that can be particularly useful in the process of generating ideas and solutions. The Pyramid of association encourages thinking outside the box and opens the door to creative chaos that leads to the discovery of new, unexpected solutions. It's like expanding your ideas by creating a pyramid of diverse inspirations. The more blocks, the higher the pyramid, and thus the greater the chance of finding the golden idea at the very top.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to support creative thinking and idea generation in the ideation phase. • to help participants think outside the box, connect seemingly unrelated ideas, and develop abstract thinking skills. • to enable the creation of fresh, innovative solutions early on in the design process.

EDUCATION
ARCHITECTS

IDEATE

32. PYRAMID OF ASSOCIATIONS
EDUCATION ARCHITECTS

IMPLEMENTATION STEPS

When using the Pyramid of association, the creative thinking process takes place in several steps (45 minutes). To successfully implement this activity, you can follow the steps below:

1. **Selecting concepts or keywords:** We start by selecting a few key concepts or keywords that will serve as our starting points for generating associations. These can be keywords related to the problem or design challenge.
2. **Write down and place on the board:** Next, write down the selected concepts on sticky notes and place them next to each other on a board or other surface to form the base of the pyramid.
3. **Creating associations:** We encourage participants to create associations with the selected phrases. These can be words, images, concepts, symbols, colours, etc. Each participant makes associations with neighbouring concepts or keywords, trying to think 'outside the box' and connect neighbouring elements, even if they seem unrelated at first glance.
4. **Recording ideas:** Ideas arising from the combination of two adjacent keywords or concepts are recorded, moving up the pyramid.
5. **Connecting concepts:** Neighbouring concepts or keywords are connected until the top of the pyramid is reached. The result of this process should be a single keyword or concept that is the key to generating solutions to the problem or challenge.
6. **Generating ideas (15 min):** Next, generate as many ideas as possible using the keyword or concept at the top of the pyramid as a starting point.
7. **Selecting the best ideas (15 min):** Finally, we select the best ideas and develop them, refining and shaping them into complete solutions to our problem or challenge.

Through this structured and creative process, the association pyramid helps us explore a variety of possibilities and generate innovative solutions.

Example: Using the pyramid of association in the profession of logistics technician.
Goal of the activity:
Students are to design a more effective way of organising deliveries in a large city.
Association pyramid – how it works:
1. We start with a keyword: 'delivery'.
2. Students generate their first associations (e.g. courier, parcel, delay, customer, bicycle).
3. Then they develop further layers of associations from each of these words. Example:
- 'bicycle' → bike lanes, ecology, traffic jams, mobility, cargo bike
- 'customer' → expectations, notifications, time, in-store pickup

Based on the branching associations, students select the most inspiring paths and generate ideas.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **Lists of creative ideas:** Thanks to the association pyramid, you have a list of creative ideas that were generated in the process of combining various associations and connections. These ideas often go beyond the usual patterns and can be more innovative and unusual than traditional approaches.
- **Better understanding of the problem:** By analysing different associations and connections while creating the pyramid, you gain a deeper understanding of the essence of the problem or challenge you are working on. This allows you to look at the problem from different perspectives and discover previously unseen connections or possibilities.
- **Motivation to continue working:** An association pyramid can serve as an inspiring warm-up before further activities. It is also an excellent introduction to the creative phase of the design thinking process, providing a solid foundation for further design activities.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- When using the Pyramid of Associations, it is important to encourage participants to creatively use non-obvious connections. Ideas that seem unrelated at first glance can lead to unexpected and valuable solutions. Therefore, it is worth inspiring participants to think outside the box and explore even the most distant connections between concepts.
- During a Pyramid of Associations session, **do not evaluate or criticise ideas.** All ideas should be included in the pyramid, even if they seem bizarre or unlikely. Only then can we be sure that the idea generation process will be open and free, which encourages the most creative solutions.
- When working with a Pyramid of Associations, it is a good idea to maintain a fast pace. The less time you spend thinking, the more unexpected ideas can arise spontaneously. Moving quickly from one concept to another can lead to more surprising and original ideas that may be the key to solving a problem or design challenge.

In summary, the key to effective use of the association pyramid is to encourage free expression, refrain from judging or criticising ideas, and maintain a fast pace of work. This will unleash the full potential of creativity and uncover the most innovative solutions.

TOOL 33 04_IDEATE_33_BRAINSTORMING_6-5-3

ACTIVITY NAME	**Brainstorming 6-5-3**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Brainstorming 6-5-3 is a modification of traditional brainstorming. Its essence is to focus more closely on a problem or challenge. Brainstorming 6-5-3 is based on teams of 6 people who have 5 minutes to generate 3 ideas. The main advantage of this method is its shorter duration, which forces participants to think faster and engage more fully. Limiting the number of ideas to 3 also helps to focus on the quality of the ideas.
ACTIVITY OBJECTIVES	Brainstorming 6-5-3 is a tool designed for quickly generating ideas in a limited amount of time. It is particularly useful in situations where we need to make quick decisions or need ideas focused on a specific project goal. This method helps us stay engaged and focused on the project challenge, as the short duration forces us to work intensively and focus on the essence of the problem. In addition, limiting ourselves to three ideas stimulates our creativity, ensuring that each idea is carefully thought out and valuable. It is worth noting that 6-5-3 brainstorming strengthens teamwork by integrating all participants. Working as a team, everyone has the opportunity to contribute and jointly generate ideas. This cooperation also facilitates decision-making processes, as the group can more quickly evaluate and select the best ideas from among those generated. Therefore, 6-5-3 brainstorming is not only a tool for generating ideas, but also a method that supports effective cooperation and decision-making processes within a team.

EDUCATION ARCHITECTS

IDEATE

33. BRAINSTORMING 6-5-3
EDUCATION ARCHITECTS

NAME:

PERSON 1	PERSON 2	PERSON 3	PERSON 4	PERSON 5	PERSON 6
IDEA 1	IDEA 1	IDEA 1	IDEA 1	IDEA 1	IDEA 1
IDEA 2	IDEA 2	IDEA 2	IDEA 2	IDEA 2	IDEA 2
IDEA 3	IDEA 3	IDEA 3	IDEA 3	IDEA 3	IDEA 3

SELECTED IDEAS

1 2 3

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Select a specific problem (15 minutes):** Ensure that the goal of the brainstorming session is clearly defined and understood by all participants.
2. **Form a team (10 minutes):** Gather a team of 6 people, trying to ensure a variety of perspectives and experiences.
3. **Prepare materials:** Provide sheets of paper, a board or other surface for writing down ideas, as well as pens or markers.
4. **Explain the rules (5 minutes):** Familiarise participants with the rules of 6-5-3 brainstorming, informing them that they have 5 minutes to generate ideas and select the three best ones.
5. **Start the timer (5 minutes):** Start the 5-minute countdown, during which participants should write or draw their ideas on sheets of paper or the board. Encourage them to think quickly and not filter their ideas.
6. **End the session (10 min):** After 5 minutes, end the idea generation session. Participants should select their three best ideas and write them down on their sheets.
7. **Presentations (20 minutes):** Each participant should present their three selected ideas in a concise manner. Allow for brief questions or comments after each presentation.
8. **Evaluate ideas (20 min):** After the presentations, each participant marks which ideas they consider the best. Select the ones that received the most votes.
9. **Further development (30 min):** The selected ideas can be further developed, prototyped or tested, depending on the context of the project.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **A list of ideas and solutions:** 6-5-3 brainstorming generates many different ideas and concepts related to a specific problem or goal. This allows you to gather a variety of perspectives and approaches, which can lead to innovative solutions.
- **Project priority assessments:** Selecting the three best ideas informs your project priorities. This means you can focus on the most important concepts and determine the next steps in the further phases of the design thinking process. It indicates which ideas are the most promising and have the greatest potential.
- **Better project team:** Brainstorming sessions promote collaboration and active communication within the team. Working on generating ideas can improve relationships between team members, increase trust and commitment to the project.
- **Better understanding of the project goal:** By limiting the number of ideas to the three best ones, 6-5-3 brainstorming helps to focus on the most promising concepts. This can increase the effectiveness of activities in the further design process, as each team member has a clear vision of the project goal and knows what to focus on.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

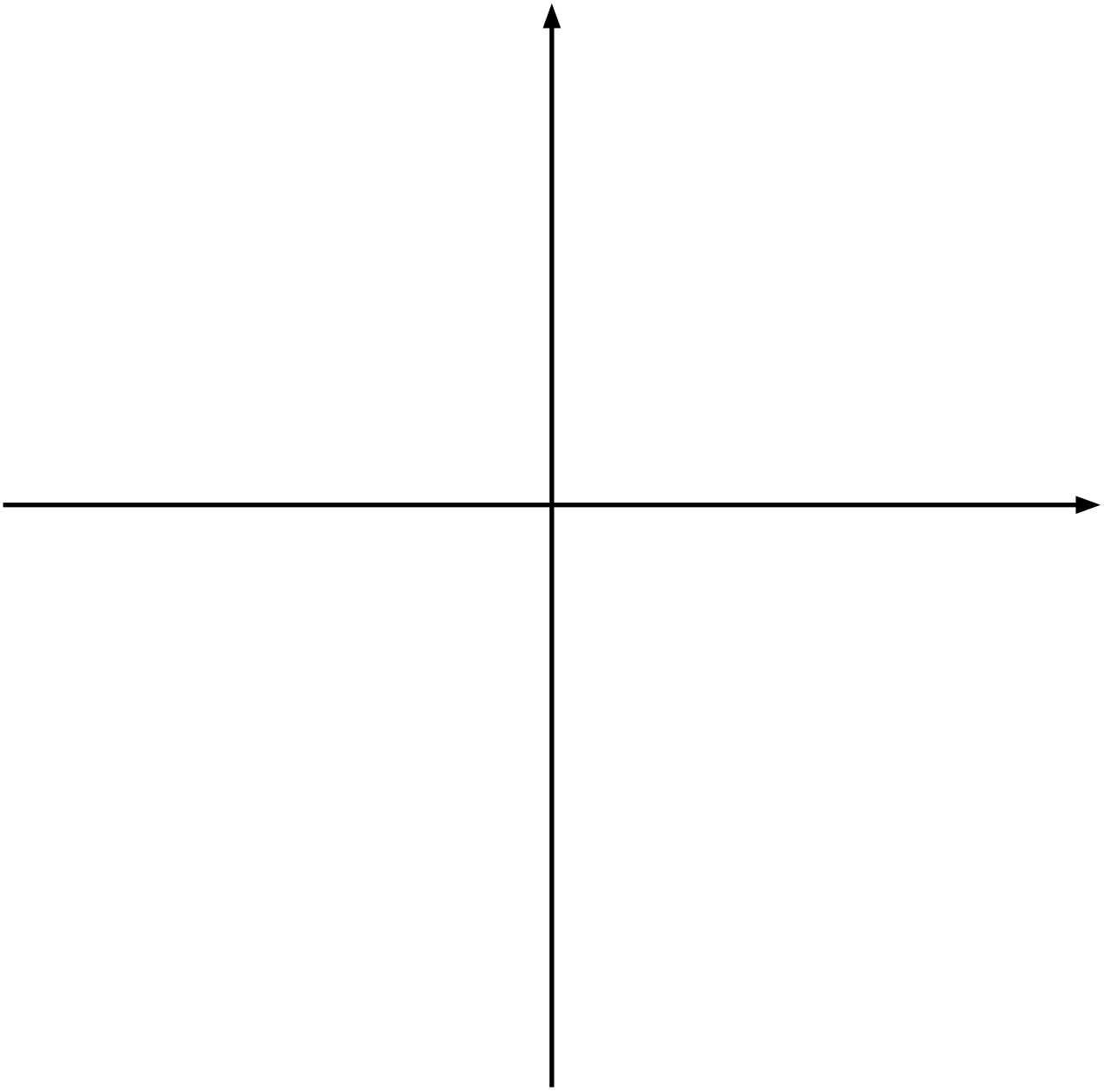
- **Clearly state the goal or problem:** Make sure that all participants are aware of the goal or problem they are trying to solve during the brainstorming session. A clear definition will make it easier to generate specific ideas and solutions.
- **Familiarise participants with the rules:** Before starting the brainstorming session, it is a good idea to briefly explain the rules of this method to participants. Explain that they have 5 minutes to generate 3 ideas and that in the first phase they should focus on quantity rather than quality.
- **Keep an eye on the time:** The 6-5-3 brainstorming method requires strict time management, as the short time frame forces participants to think quickly and maintain energy within the group. Use a stopwatch or timer to ensure that each stage lasts exactly as long as planned.
- **Encourage creativity:** During the 6-5-3 brainstorming session, encourage participants to be creative and generate as many ideas as possible. Let them know that there are no bad ideas at this stage and that every suggestion can contribute to finding a solution.
- **Follow the three ideas rule:** Once the brainstorming session is over, make sure that each participant has selected the three best ideas from those generated. This rule must be strictly followed to ensure that the brainstorming session results in a list of the three best concepts.
- Before starting a 6-5-3 brainstorming session, make sure that the goal or problem has been clearly formulated and understood by the participants. It is also a good idea to familiarise participants with the rules of 6-5-3 brainstorming before you start.
- 6-5-3 brainstorming requires strict time management. The short time frame requires quick thinking and helps maintain the energy of the group.
- During the 6-5-3 brainstorming session, encourage participants to be creative and generate as many ideas as possible, without judging their quality. At the end of the brainstorming session, remember that the goal is to come up with three ideas. Stick to this rule strictly.

TOOL 34 04_IDEATE_34_SCENARIOS

ACTIVITY NAME	**Scenarios**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Scenarios are projections of what might happen, imaginings and alternative versions of reality. Scenarios are stories or narratives that describe how a designed solution might behave in specific situations or contexts. Scenarios can take the form of descriptions, narratives or even drawings. Scenarios allow designers to empathise with users and improve the performance of the solution they are creating. Thanks to scenarios, design becomes more user-centred and context-specific. Scenarios can be used in various phases of design thinking; in the ideation phase, they can be a source of creative ideas and solutions.
ACTIVITY OBJECTIVES	Scenarios are a tool that allows you to design and test different versions of the future. They enable you to predict how a given solution may function in various contexts – social, technological or organisational. Thanks to them, the team can assess the potential opportunities, threats and side effects of a project before it is implemented. Creating scenarios not only allows you to plan your actions better, but also to identify hidden risks, point out new opportunities and make more informed decisions. It is a practical tool for visualising the future and testing ideas without having to implement them immediately.

EDUCATION
ARCHITECTS

34. SCENARIOS
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Creating a scenario of possibilities** should begin with preparing a list and selecting the most important factors of change. Factors of change are events, phenomena and processes that have the greatest impact on transformations taking place in the world, e.g. ageing societies, technological development, etc. When selecting change factors, you can use the context map prepared in the first stage of design thinking (20 min).
2. **Select the main factors** of change that will form the basis for scenario creation and place them on the axes. These may be factors that could have the greatest impact on the designed solution. To construct scenarios, select the factors with the greatest impact and likelihood of occurrence. (20 min)
3. **Prepare a scenario matrix.** Create a matrix or table in which the change factors placed on the axes will intersect. Place one uncertainty factor on one axis and the second factor on the other axis. This will create intersection points that will form the basis for four scenarios. Each of the selected change factors should be placed on axes pointing in opposite directions. An arrow on the right indicates an increase in the change factor, while an arrow on the left indicates a decrease (20 min).
4. **The next step is to generate scenarios.** Go through each square created by the intersection of the axes and generate scenarios that describe how the solution may evolve in different contexts. Focus on describing the situation and user behaviour in these scenarios. The scenarios show how the solution may change under the influence of specific factors (45 min).
5. **Select the scenarios** that are most relevant and valuable to the project. The number of scenarios prepared depends on your needs or imagination. You can prepare any number of scenarios for different factors. When generating scenarios, it is a good idea to create at least one optimistic and one pessimistic scenario (25 min).

Scenarios are particularly useful in the context of uncertainty and environmental change. Below is an example of how you can create Scenario Possibilities for an e-learning platform offering programming courses.

The purpose of the scenarios:

a) To understand future challenges and opportunities.

b) To prepare strategies for different possible futures.

Better align the offer with changing market needs.

***Step 1:** Identify key factors influencing the future*

Technology: development of new tools and technologies

Legal regulations: changes in regulations governing online education

Market needs: changing expectations and needs of students

Competition: actions of competitors and new educational offers.

Finance: changes in the availability of funding and education budgets

***Step 2:** Creating axes of uncertainty*

Select the two most uncertain and critical factors that will form the axes for the scenarios:

Technology development: slow development vs. rapid development

Legal regulations: restrictive regulations vs. liberal regulations

***Step 3:** Defining scenarios*

Based on the selected axes, define four possible scenarios for the future:

***Scenario 1:** 'Rapid technological development and liberal regulations'*

Technology: rapid development of educational tools, AI, VR

Regulations: liberal regulations conducive to innovation

Strategies: Investing in the latest technologies, developing innovative courses, collaborating with creators of new tools

***Scenario 2:** 'Rapid technological development and restrictive regulations'*

Technology: rapid development of educational tools, AI, VR

Regulations: strict regulations limiting certain aspects of online education

Strategies: adapting courses to regulations, lobbying for favourable changes in regulations

***Scenario 3:** 'Slow technological development and liberal regulations'*

Technology: slow development of technology, few new tools

Regulations: liberal regulations promoting flexibility

Strategies: Focus on improving existing tools, creating valuable educational content, building communities

***Scenario 4:** 'Slow development of technology and restrictive regulations'*

Technology: slow technological development, few new tools

Regulations: strict regulations limiting online education

Strategies: Minimise risk, optimise costs, seek market niches, offer regulatory compliance advisory services

Step 4: Develop detailed action plans

For each scenario, develop detailed action plans, taking into account:

Technology investments

Changes to the course offering

Marketing activities

Cooperation with partners

Risk management and regulatory compliance

Examples of detailed plans for Scenario 1:

Technological investments: Invest in the development of VR and AI-based courses, establish cooperation with technology companies.

Changes to the course offering: Introduce new courses related to the latest technologies, such as VR programming.

Marketing activities: Focus marketing campaigns on the innovation and modernity of the courses.

Cooperation with partners: Establish partnerships with technology leaders and other educational platforms.

Risk management and compliance: Monitor regulations to stay up to date with any changes and provide training for the team.

Creating scenarios allows teams to better prepare for various future challenges and opportunities, leading to a more flexible and effective strategy.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **A better understanding of the context of the solution you are designing:** By creating scenarios, you will gain a better understanding of the factors and changes that may affect your solution. This will help you identify potential challenges, but also opportunities that may arise.
- **A list of different scenarios:** Scenarios allow you to explore many different future situations, taking into account various variables and factors affecting the project. This allows you to consider different possibilities and prepare for different consequences.
- **Better understanding of risks and threats:** Scenarios will make you more aware of the risks and threats associated with your project. This will allow you to address them better and prepare appropriate strategies that can be adjusted as needed.
- **Visualisation of possible situations:** Scenarios visualise how your project may develop in different contexts, making it easier to understand how the solution will work in practice. This can lead to better design decisions.

In summary, scenarios are a tool that helps you understand different aspects of a project and prepare for different possibilities, which in turn leads to better decisions and a better-planned project.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Before creating scenarios, it is important to thoroughly understand the context of the proposed solution. A context map, which can be prepared in the early stages of design thinking, can be an excellent source of information. It will provide a clear picture of what is happening around the project and what factors may influence it.
- The next step is to carefully prepare the change factors. Make a list of key factors such as technological changes, market trends, social transformations or even political factors. At this stage, it is particularly important to consider two key aspects:

1. **Quantify the uncertainty surrounding key factors** – it is worth estimating how uncertain a given factor is. This may include analysing available data, market forecasts or consulting experts. Such an analysis will help you understand which factors carry the greatest risk.
2. **Assess whether their impact would be significant** – once the level of uncertainty of key factors has been determined, it is necessary to assess whether their impact on the project would be significant enough to be taken into account in further work. This assessment allows you to focus on those aspects that are most important for the success of the project.

- When creating scenarios, encourage the team to think creatively and explore different possibilities. Consider different levels of uncertainty and diverse contexts to get a more complete picture. The more diverse the scenarios, the better prepared you will be for different situations that may arise during the project.

Including these additional elements – uncertainty analysis and impact assessment – will not only improve the quality of your scenarios but also make them more realistic and useful in the decision-making process.

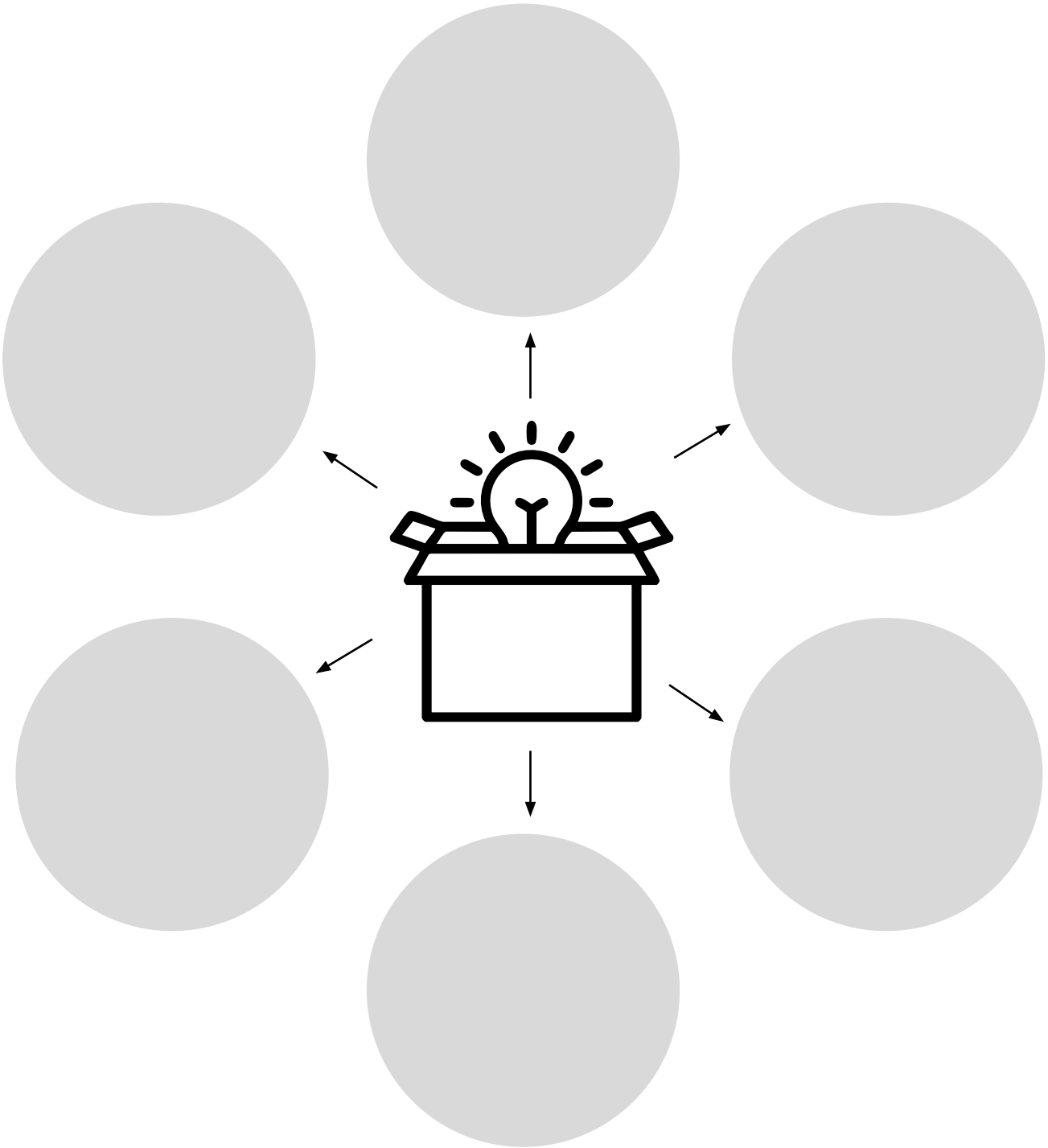
TOOL 35 04_IDEATE_35_OUT_OF_THE_BOX

ACTIVITY NAME	**Out of the box**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	'Out of the box' is a term used to describe a creative and unconventional approach to problem solving or thinking. It means that a person who thinks 'out of the box' is open to unusual, original ideas and unconventional approaches that go beyond established patterns of thinking. This approach is often used in the context of innovation and design to generate novel solutions and push the boundaries of traditional thinking. 'Out of the box' can be seen as a design thinking tool that can prove extremely valuable in projects requiring original solutions and approaches to challenges with no obvious answers.
ACTIVITY OBJECTIVES	The **'Out of the box'** method is a tool that helps us think differently and more creatively when faced with a problem. Its main goal is to promote unusual approaches and creative thinking that could lead to better solutions. When using the 'Out of the box' method, we try to go beyond the usual patterns and look for new, original ideas. This allows us to solve problems in a way that may be completely different from what we had previously thought of. It is important that we do not limit ourselves to traditional solutions but open ourselves up to a variety of ideas and inspirations. This allows us to discover completely new ways of thinking and approaching projects. The 'Out of the box' method also helps us avoid routine and monotony in our work on projects. It allows us to find new sources of inspiration and motivation, which makes our work more interesting and challenging. In short, 'Out of the box' is a tool that helps us think differently and create more creative and innovative solutions. Thanks to it, we can better deal with problems and achieve greater success in our projects.

EDUCATION ARCHITECTS

IDEATE

35. OUT OF THE BOX
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

The activities in the 'Out of the box' activity are designed to stimulate unusual thinking. To successfully implement this activity, you can follow the steps below:

1. **Define the purpose of the activity (10 min):** Start by defining the main purpose of the activity. It could be to solve a specific problem, generate new ideas, or simply develop creativity.
2. **Prepare the necessary materials:** Prepare all the materials you need to help participants express their creative ideas. These could be sheets of paper, pens, crayons, whiteboards, Lego bricks or other tools.
3. **Establish the rules of the activity (10 min):** Work with participants to establish the rules of the activity, such as time limits, no judging of ideas, or encouraging experimentation.
4. **Formulate unusual questions or problems (20 min):** Ask participants to formulate unusual and non-obvious questions or problems to be solved. These can be contradictory, abstract or surprising questions.
5. **Generating ideas (15 min):** Give participants time to generate ideas individually. These can be answers to the unusual questions formulated earlier or any ideas they come up with. You can ask participants to think about how the character they have chosen would solve the problem.
6. **Sharing ideas (20 min):** After the individual phase, encourage participants to share their ideas with the group. You can do this in the form of brainstorming or a casual discussion.
7. **Evaluating ideas (15 min):** After the activity, evaluate which ideas were the most unusual and creative. Think about what conclusions can be drawn and what can be applied in practice.

Example of an 'Out of the Box' tool for an e-learning platform

Context:

An e-learning platform offering programming courses wants to stand out in the market, increase student engagement and offer a unique learning experience.

Step 1: Define the problem

The team defines the problem to be solved:

- *How can we create innovative features and content for our e-learning platform to increase student engagement and stand out from the competition?*

Step 2: Preparing the team

The team is encouraged to think outside the box. This can be achieved through various techniques, such as:

- *Brainstorming: Generating as many ideas as possible without judging them at first.*
- *Mind Mapping: Visually representing different aspects of a problem and related ideas.*

- *Role Play: Taking on the role of different stakeholders (e.g. students, teachers) to understand their perspectives.*

Step 3: Stimulate creativity

Use tools and techniques that help the team think differently:

- *SCAMPER method: Encourage questions such as 'What can be Substituted?', 'What functions can be Combined?', 'What elements can be Adapted?', 'What can be Modified?', 'What can be Used differently?', 'What can be Eliminated?', 'How can it be Rearranged?'.*

Example of using the SCAMPER method:

1. *Substitute: Can we replace traditional text materials with more interactive elements such as videos, animations or simulations?*
2. *Combine: Can we combine programming courses with gamification elements so that students earn badges and rewards for their progress?*
3. *Adapt: Can we adapt technologies from other industries (e.g., virtual reality from gaming) to teach programming?*
4. *Modify: Can we modify the structure of courses to make them more modular and allow students to learn in short, intensive blocks of time?*
5. *Put to another use: Can the platform be used to organise online hackathons where students can put their knowledge into practice?*
6. *Eliminate: Can we eliminate long final exams in favour of continuous assessment and feedback throughout the course?*
7. *Reverse: Can we change the way we teach so that students first work on a project and then learn the theory needed to complete it?*

Step 4: Generate ideas

Use 'Out of the Box' techniques to generate ideas. Sample ideas:

- *Interactive videos and simulations: Create videos that allow students to make decisions and observe the consequences of their choices.*
- *Gamification: Introduce game elements such as levels, badges, and leaderboards to keep students motivated to continue learning.*
- *Virtual reality (VR): Using VR to create virtual laboratories where students can experiment with coding in a realistic environment.*
- *Modular courses: Designing courses as short modules that can be completed in a few hours and that make up larger, more advanced courses.*
- *Online hackathons: Organising regular events where students work in teams on real-world projects.*

Step 5: Evaluation and prototyping

The team evaluates the ideas generated in terms of feasibility, cost and potential impact on student engagement. The best ideas are prototyped and tested.

Step 6: Implementation

Based on the test results, the team selects the best solutions for implementation. The process is monitored and modified as necessary.

Summary

The 'Out of the Box' tool in Design Thinking allows teams to think outside the box and generate innovative solutions.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **New ideas and creative solutions:** you can generate innovative ideas that can lead to original design or business solutions. This approach stimulates creativity and encourages thinking outside the box.
- **Diverse perspectives on a problem:** The 'Out of the box' method allows you to consider different points of view and perspectives, which helps you better understand problems or challenges. This allows you to approach a problem from different angles and find more comprehensive solutions.
- **Better communication within the team:** Thanks to the diversity of ideas and perspectives, 'Out of the box' can improve communication within a team or organisation. The open atmosphere that prevails during this type of activity encourages the exchange of ideas and cooperation between team members, which can increase the effectiveness of the group.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- **Stay open-minded and avoid judging:** It is important to ensure an open and friendly environment where participants feel comfortable. Refrain from judging or criticising ideas during the activity. This will allow participants to feel more comfortable and freer to express their unusual ideas.
- **Encourage unusual challenges:** Unusual challenges are key to generating new ideas. Encourage participants to ask questions or pose problems that go beyond the usual patterns and require non-standard solutions.
- **Visualise ideas:** Help participants visualise their ideas using drawings, diagrams or prototypes. Visualisation can facilitate understanding of concepts and contribute to better understanding and evaluation of ideas.
- **Be flexible with time:** Do not impose too strict time constraints, but at the same time, make sure that the activity does not take too long. The right balance is key to allowing ideas to flow freely while maintaining control over time.

TOOL 36 04_IDEATE_36_COLLABORATIVE_SKETCHING

ACTIVITY NAME	**Collaborative Sketching**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Collaborative sketching is a tool that enables effective collaboration and idea generation in the design thinking process. Although it can be used at any stage of the process, its greatest potential is revealed during the ideation phase. This is when participants work together to visualise a solution concept by drawing or designing ideas. During collaborative sketching, all team members see and work on the concept in real time, allowing for a dynamic exchange of ideas and creative refinement. Similar to traditional brainstorming, this process encourages the creation of unusual solutions and breaks down thinking patterns. This is particularly useful in remote work, where the possibility of physical meetings is limited. In short, collaborative sketching is a tool that supports dynamic collaboration and real-time idea generation. It is an effective method that can be used especially in remote work/learning environments.
ACTIVITY OBJECTIVES	Collaborative sketching is a tool that helps project teams collaborate and generate ideas effectively. The main goal of this tool is to enable interaction between team members by creating, sharing and developing ideas in a way that is consistent with the principles of project work. Thanks to collaborative sketching, all team members can actively participate in the idea generation process, understand the project challenge and communicate effectively with each other. This tool allows for joint idea generation, which means that every team member can contribute their ideas and insights. In addition, it enables the creation of prototypes of ideas, allowing for quick verification and testing of different concepts. Collaborative sketching also facilitates the work of distributed teams, as it allows them to work on a project in real time, even when team members are in different locations. This tool promotes collaboration, creation, idea sharing and effective communication within the project team, contributing to better and more efficient project delivery.

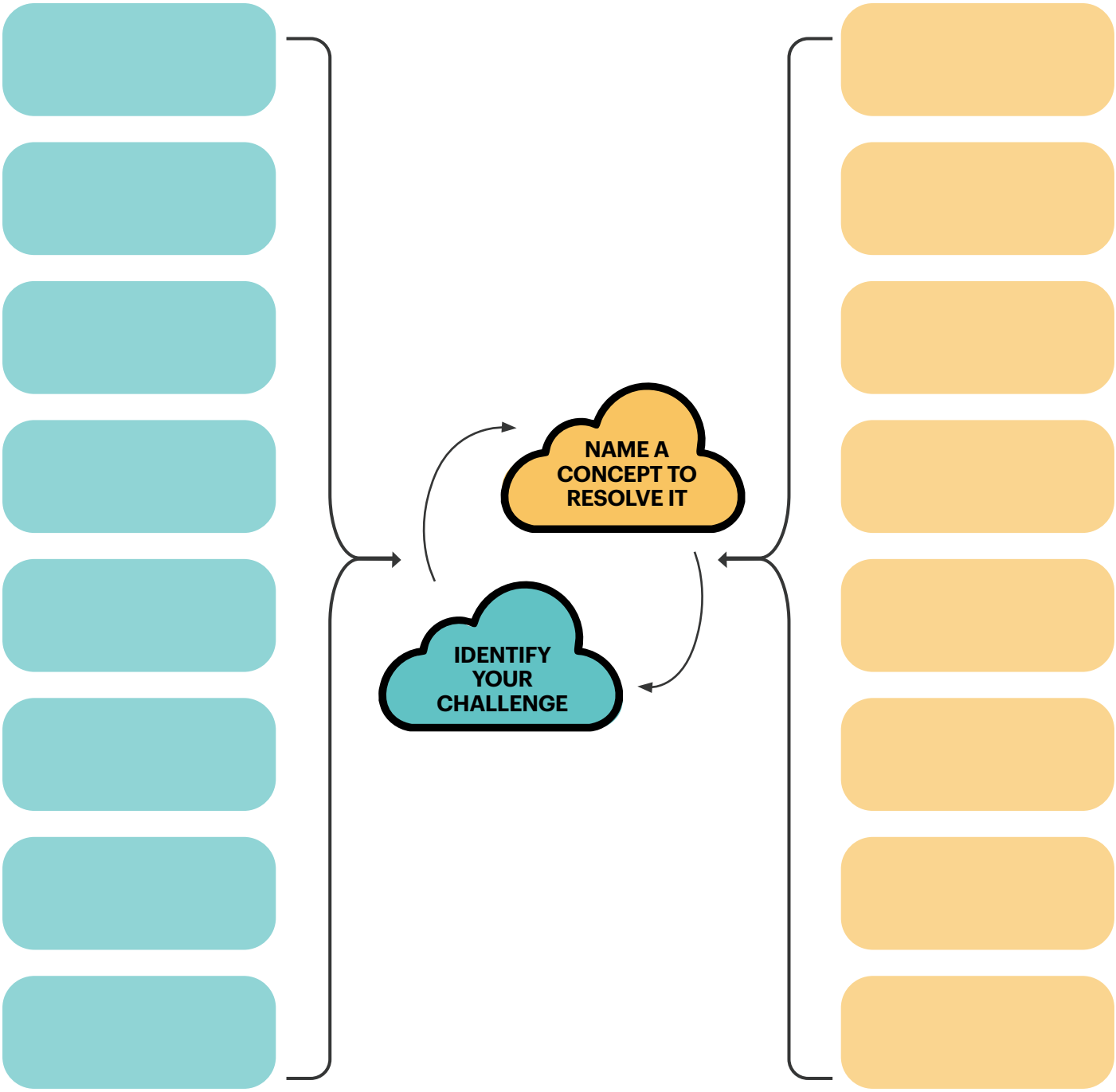
EDUCATION ARCHITECTS

IDEATE

36. COLLABORATIVE SKETCHING
EDUCATION ARCHITECTS

CHALLENGES TEAM MEMBERS SUGGESTIONS

SOLUTIONS TEAM MEMBERS SUGGESTIONS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Remind all team members of the project challenge (5 minutes).
2. Present information on the direction of the search for solutions and treat it as inspiration for designing a visualisation of the idea (10 minutes).
3. Print out as many Collaborative Sketching templates as there are participants.
4. Set a time limit for drawing the idea.
5. Ask participants to draw their solution ideas (each team member draws their own idea) (e.g. 15 minutes),
6. In the next step, ask each participant to pass their drawing to the person next to them, clockwise,
7. Then ask each workshop participant to add their ideas to the drawing they received from their neighbour (10 minutes).
8. Repeat the cycle until the drawings return to their original creators.

Of course, adapting the Collaborative Sketching tool to remote working conditions is equally important. Here's how you can do it:

1. **Use remote working tools:** Instead of printing Collaborative Sketching templates, use remote working platforms such as real-time document creation and sharing apps, online creative boards or special online whiteboard tools. Ensure that all participants have access to these tools and that they can collaborate freely in real time.
2. **Set a drawing time and communicate:** As with live work, set a time for drawing ideas and clearly communicate this time to participants. Use the communication features available in your chosen tools, such as real-time chat, to encourage interaction and monitor progress.
3. **Organise virtual sessions:** Organise an online session where all participants can work together on Collaborative Sketching. Provide instructions and explanations about the process so that everyone is well informed and can work freely.
4. **Provide opportunities for interaction:** Make sure that each participant has the opportunity to share their drawing with other participants and receive drawings from others. Encourage open exchange of ideas and collaboration.
5. **Monitor and document progress:** During the online session, monitor progress and encourage participants to document the process. You can save or store files from the session so that you can return to them later and use the ideas you have gathered.
6. **Adapting** the Collaborative Sketching tool to remote working conditions requires awareness of the tools available virtually and effective organisation and communication to ensure effective collaboration and idea generation.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **Visualisations of solution ideas:** Team-generated visualisations of ideas that can serve as a reference point in later phases of the project. These visualisations will help the team better understand potential solutions.
- **An agreed-upon project challenge:** A jointly defined project challenge will allow the team to focus on the relevant aspects of the project and ensure a common understanding of the objectives.
- **Better integration of the project team:** Working together on Collaborative Sketching can lead to better team integration, increased trust and cooperation among members.
- **A list of ideas to develop: A** collective list of ideas will serve as a starting point for further work on the project, allowing for further development of concepts.
- **Material for prototyping:** Visualisations of ideas can be used as a basis for creating prototypes that will be tested in subsequent stages of the project.
- **New solution ideas:** Through creative interaction and exploration of different perspectives, Collaborative Sketching can lead to the generation of new, innovative ideas for solving a problem.

These outcomes of Collaborative Sketching provide a solid foundation for further project activities, enabling the team to continue working in line with the project's objectives and goals.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- When working remotely, follow the rules of brainstorming, but in an online format. Make sure that all participants have an equal opportunity to speak and encourage active participation by using features such as chat or real-time sharing tools.
- Use remote working platforms that enable real-time collaboration, such as Zoom, Microsoft Teams or Google Meet. You can use online drawing tools or document editing tools to record ideas and visualise solutions.
- When working remotely, each participant can use different colours of virtual markers or highlighters in the online collaboration app. This will make it easier to identify the authors of individual ideas and encourage active participation in the process of generating visualisations of the solution.
- Thanks to these customisations, even remote work can foster effective teamwork and generate innovative solutions through Collaborative Sketching.

TOOL 37 04_IDEATE_37_ACTIVE_EXPERIENCE_MAP

ACTIVITY NAME	**Active experience map**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	This activity reflects a holistic view of the user experience, aiming to understand what happens before, during, and after the user's primary interaction with the educational product or service.
ACTIVITY OBJECTIVES	This activity is especially useful after conducting field research. The active experience map is a qualitative evaluation based on the user's perspective. It helps visualize strengths, weaknesses, and opportunities, and brings all that knowledge into the ideation phase.

EDUCATION ARCHITECTS

IDEATE

37. ACTIVE EXPERIENCE MAP
EDUCATION ARCHITECTS

STAGE	AWARENESS	CONSIDERATION	DECISION	DELIGHT
TOUCH POINT				
CUSTOMER PROCESS				
EXPERIENCE				

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction to Active Experience Mapping (10 minutes):**

- Explain the purpose and benefits of Active Experience Mapping in design thinking.
- Provide examples to illustrate how Active Experience Maps help visualize user journeys and identify areas for improvement.

2. **Define the User Journey (10 minutes):**

- Choose a specific user journey or scenario that participants will map during the activity. This could be related to a product, service, or process.
- Clarify the starting point and endpoints of the user journey to establish boundaries.

3. **Mapping the User Journey (30 minutes):**

- Divide participants into small groups or pairs, depending on the size of the group.
- Provide each group with a large paper or section of the whiteboard to create their Active Experience Map.
- Set a timer and ask participants to map out the user journey step by step, using markers and sticky notes to represent different stages and touchpoints.
- Encourage participants to include both physical and digital interactions, emotions, and key actions taken by the user.

4. **Role-Playing and Empathy Building (20 minutes):**

- After creating the initial map, facilitate a role-playing activity where participants embody the perspective of the user.
- Ask participants to act out the user journey, narrating their actions, thoughts, and emotions at each touchpoint.
- Encourage empathy-building by immersing participants in the user's experience and perspective.

5. **Ideation and Solution Generation (30 minutes):**

- Based on the insights from the Active Experience Mapping activity, conduct a brainstorming session to generate ideas for improving the user experience.
- Encourage participants to think creatively and consider a range of possible solutions to address identified pain points and enhance moments of delight.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Better understand user journeys, identify pain points, and generate ideas for improving the overall user experience. • Increase collaboration and empathy among them, leading to innovative solutions grounded in user needs and insights.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Use a Design Thinking Canvas or similar framework to structure the activity and capture insights systematically. • Encourage participants to think beyond the immediate user journey and consider broader ecosystem interactions. • Consider conducting user interviews or observations prior to the mapping activity to gather additional insights.

TOOL 38 04_IDEATE_38_CONVERGENCE_MAP

ACTIVITY NAME	**Convergence Map**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	This activity uses a visual method to analyse the convergence of two or more topics in order to identify opportunities for innovation.
ACTIVITY OBJECTIVES	The main objective of a convergence map in design thinking is to guide participants through the process of selecting and refining ideas generated during ideation stages. It helps streamline the decision-making process by visually organizing and evaluating various concepts or solutions based on specific criteria.

38. CONVERGENCE MAP
EDUCATION ARCHITECTS

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to the activity (10 minutes):

- Explain the purpose and benefits of this activity
- Provide examples to illustrate how this activity will help.

For example, if we are talking about health promotion at the school level, several factors may have an influence, such as economic conditions, gender, public policies, or school nutrition, among others. Once the factors have been identified, we can observe different points of convergence. For example, if gender, nutrition and public policy converge, we can generate ideas that address all three areas. However, it is important not to force connections or try to converge too many topics—more than five, for example, is usually unnecessary.

2. Identify (20 minutes):

- Identify different areas and topics of the project such as users, technology and market. We then visualize them.
- Reflect on the need to converge the subjects and topics to get to a specific goal and try to understand what happens in the intersections (think of what happens if there are more than to topics and not all of them are intersected).
- Also identify all the convergence points where opportunities might exist

Take into consideration our previous example that discussed the following convergence points.

Convergence: Economic Factors + School Meals + Public Policies

Description:

- Economic Factor: Budget allocated to school meal programs and economic accessibility for families.
- School Meals: Implementation of healthy food programs in schools.
- Public Policies: Legislation regulating access to healthy food in schools and subsidies to ensure equity.

3. Prototype Solutions (20 minutes):

- In small groups, prototype solutions based on the selected ideas.
- Participants can sketch out their prototypes on paper or use materials to create low-fidelity prototypes.
- Share the results with the rest of the group.

Product Prototype: "Self-sustainable School Gardens Kit".

- Description: A modular kit for the creation of school gardens that would allow schools to produce part of their own food, reducing costs and promoting healthy eating. This kit would include tools, seeds, cultivation guides and a maintenance plan. In addition, it would be supported by public policies that encourage the creation of school gardens, with partial financing and training for teachers and students.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Move towards the most promising ideas or solutions. • Ensure alignment with user needs and project objectives. • Foster efficiency, clarity, and collaboration, ultimately leading to the development of innovative and impactful solutions.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Use a Design Thinking Canvas or similar framework to structure the activity and capture insights systematically. • Consider incorporating role-playing or scenario-based activities to add depth to the empathy-building phase. • Encourage participants to think outside the box and embrace unconventional ideas and solutions.

TOOL 39 04_IDEATE_39_IDEATING_INTERACTIVE_TEACHING_STRATEGIES

ACTIVITY NAME	**Ideating Interactive Teaching Strategies**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	This activity aims to generate a diverse range of creative ideas for engaging and interactive teaching methods. Participants will explore innovative approaches to enhance student participation, understanding, and retention. Through a series of collaborative ideation activities, participants will brainstorm and refine strategies applicable to various educational contexts.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To provide an overview of the ideation phase, emphasizing the importance of creativity in teaching. • To share success stories of educators who implemented innovative teaching strategies with positive outcomes. • To set the tone for a creative ideation session focused on interactive teaching.

39. IDEA GENERATION MATRIX
EDUCATION ARCHITECTS

Teaching Strategy	Creativity	Engagement level	Adaptability	Notes/Comments
	High, Medium, Low			
Gamification in History	High	High	Medium	Incorporate game elements to make history lessons interactive.
Flipped Classroom Model	Medium	High	High	Flip traditional lecture-based learning for better engagement.
Interactive Simulations	High	High	Low	Use simulations to immerse students in real-world scenarios.
Collaborative Projects	Medium	High	Low	Foster collaboration through group projects and discussions.
Socratic Questionin	Low	Medium	High	Encourage critical thinking through guided questioning.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1) **Introduction to Idea Generation:** Mention that this activity is designed to help you organize and assess the ideas you have come up with for teaching strategies. You will use a specific tool to sort these ideas based on how creative, engaging, and adaptable they are. Use the template called the Idea Generation Matrix. This is a chart or table where you will list and sort your ideas.
2) **Break into Groups:** Form small teams with other participants.
3) **Categorize Ideas:** Within your group, use the matrix to sort your ideas into different categories based on three factors:

- **Teaching Strategy:** Write down the specific interactive teaching strategy you're using.
- **Creativity:** How innovative or original is the idea? Check how much creativity is needed to use this strategy effectively.
- **Engagement Level:** How likely is it to capture and hold students' interest? Think about how likely it is that students will be interested and involved with this strategy.
- **Adaptability:** How easily can the idea be adapted for different subjects or teaching environments? Determine how easily this strategy can be adjusted for different subjects or teaching settings.
- **Notes/Comments:** Add any extra details, insights, or important points about each teaching strategy.

4) **Discuss and Develop:** For each idea, discuss within your group how it scores in each of the three categories. Provide explanations and details to support your ratings.

The matrix helps you structure your ideas in a systematic way, making it easier to see which ones stand out. By looking at creativity, engagement, and adaptability, you can identify which teaching strategies are the best balance of being exciting, engaging, and practical. The goal is to find teaching strategies that are not only imaginative but also effective and feasible for various teaching scenarios.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Develop their creative thinking skills for generating innovative teaching strategies.
- Experience the power of collaboration in generating and refining ideas.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Emphasize the importance of incorporating diverse perspectives in ideation to address different learning styles.
- Highlight the iterative nature of ideation, encouraging participants to continuously refine and improve their teaching strategies.
- Remind participants to consider the accessibility of interactive teaching strategies to accommodate diverse learners.
- When rating engagement, consider how the strategy supports different learning styles (e.g., visual, auditory, kinaesthetic).
- Encourage your group to reflect on how easily each idea can be adapted for learners with special educational needs (e.g., language simplification, assistive tools).

TOOL 40 04_IDEATE_40_DIVERGENT_THINKING

ACTIVITY NAME	**Divergent Thinking**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Divergent thinking is about coming up with many different ideas or solutions for a problem. It encourages people to think creatively and explore lots of possibilities, without worrying about what's "right" at first. The goal is to be open-minded and consider as many options as possible before choosing the best one.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to help participants learn to welcome and consider different viewpoints and creative ideas. • to support participants to stay open to thinking outside the box and not sticking to just one way of solving problems.

EDUCATION ARCHITECTS

40. DIVERGENT THINKING
EDUCATION ARCHITECTS

MAIN TOPIC			
Sub 1	**Sub 2**	**Sub 3**	**Sub 4**
Sub 5	**Sub 6**	**Sub 7**	**Sub 8**
Sub 9	**Sub 10**	**Sub 11**	**Sub 12**
Sub 13	**Sub 14**	**Sub 15**	**Sub 16**

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1.Introduction to Divergent Thinking

Point out how divergent thinking is different from convergent thinking, which focuses on narrowing down options and finding a single, optimal solution.

Talk briefly about famous innovations that came from **divergent thinking** like Post-it Notes:

Problem: The team at 3M needed to find a use for an adhesive that was less sticky than desired.

Divergent Thinking Solution: Instead of discarding the product, the team brainstormed alternative uses. One idea was creating a reusable sticky note that wouldn't damage surfaces.

Outcome: The Post-it Note became one of 3M's most iconic and profitable products, revolutionizing how people organize tasks.

2.Begin with a Main Idea:

- Start with the main concept or topic that you are trying to brainstorm ideas about.
- In each smaller box around the main idea, write down related subtopics or ideas that come to mind.
- Use short words, quick phrases, or simple drawings to represent your ideas in each subtopic box.

3.Mind map ideas:

- Draw lines or arrows to show how different ideas or subtopics are related to each other.
- Don't worry about organizing everything perfectly. The aim is to freely explore and connect as many ideas as possible.
- Encourage the use of mind maps to generate lots of ideas related to the challenge.
- Help groups work together to come up with ideas.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Learn to think creatively and generate a wide range of ideas, moving beyond traditional solutions.
- Gain skills to visually organize and explore their ideas effectively by using mind mapping.
- Understand the value of working together in groups to brainstorm and refine ideas, benefiting from diverse perspectives.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Focus on generating as many ideas as possible, increasing the chances of finding innovative solutions.
- Welcome all ideas, even unconventional ones, to spark unexpected innovation.
- Incorporate various viewpoints to enrich the pool of ideas with diverse experiences.
- Revisit and refine ideas continuously as new insights emerge.
- Encourage constructive criticism to improve and expand upon initial ideas.
- Connect ideas to practical uses, guiding ideation toward feasible solutions.
- Use color-coded or symbol-based mind maps for participants who may struggle with written expression or have learning differences.
- Encourage groups to include perspectives from people of different cultural backgrounds, ages, or abilities to expand the idea pool.

TOOL 41 04_IDEATE_41_HOW_MIGHT_WE

ACTIVITY NAME	**"How might we"**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Using the "How Might We" (HMW) methodology, the session provides participants with the opportunity to frame and investigate questions that are solution-oriented. The participants will acquire the ability to transform difficulties into opportunities, thereby cultivating a constructive and solution-oriented frame of mind. Participants will engage in a series of activities that will allow them to generate ideas and refine potential solutions to the difficulties that have been discovered within the educational system.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to reframe challenges into opportunities. • to help participants approach problems creatively, sparking new ideas and innovative solutions, by using different prompts.

EDUCATION ARCHITECTS

IDEATE

41. HOW MIGHT WE
EDUCATION ARCHITECTS

"How might we enhance student engagement in virtual classrooms?"

"How might we redesign traditional homework to make it more meaningful for students?"

"How might we create a more inclusive learning environment for students with diverse needs?"

"How might we leverage technology to improve assessment and feedback for teachers?"

"How might we encourage a growth mindset among students facing academic challenges?"

"How might we reimagine the school library to promote a culture of reading?"

"How might we address the digital divide and ensure equitable access to resources?"

"How might we design a flexible curriculum that adapts to individual learning styles?"

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to "How Might We"

Provide each participant with a set of How Might We cards. Cards can be pre-printed with open-ended statements or left blank for participants to fill in.

Example: Students in a remote learning setup report feeling disconnected and less motivated to participate actively in class.

How Might We statement:

- *How might we create a virtual classroom that feels more interactive and inclusive?*
- *How might we motivate students to participate actively during remote lessons?*
- *How might we use technology to foster collaboration among students?*

2. Prioritization (20 mins): Vote on the Most Impactful HMW Questions

- Remind participants of the session's goal: identify the HMW question(s) that will lead to the most actionable and impactful solutions.
- Encourage participants to consider criteria like feasibility, relevance, and potential impact when voting.
- Give each participant a limited number of votes (e.g., 3 votes) to distribute among the questions they find most compelling or urgent.
- Review the top 2-3 questions with the most votes.
- Facilitate a quick discussion to confirm the chosen questions align with the session's goals.

3. Ideation (30 mins): Generate Potential Solutions

Use prompts to spark ideas: "Think of solutions that have worked in other fields or contexts," or "What if we removed current constraints?"

Take 10 minutes of individual brainstorming (quiet time for each participant to jot down ideas).

Then provide 15 minutes group sharing and discussion (sharing ideas on a virtual or physical board).

Examples of Generated Ideas for "How might we create a more interactive and engaging remote learning environment?":

- Introduce rewards for participation (points, badges, leaderboards).
- Use breakout rooms for group activities or polls for real-time engagement.
- Virtual scavenger hunts or collaborative storytelling activities.

Quickly rank ideas using a simple impact-feasibility matrix.

Choose 1-2 ideas for further refinement or prototyping.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Practice generating a diverse range of potential solutions by reframing challenges.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Ensure all participants contribute actively during brainstorming and solution prioritization. Create a welcoming environment for diverse ideas and perspectives. Help students critically assess solutions based on feasibility, impact, and novelty. • Tailor cards to address specific educational challenges or topics. Recognize innovative ideas and encourage students to think creatively. Remind students that ideation is a continuous process, with room for refinement based on feedback.

TOOL 42 04_IDEATE_42_NEGATIVE_BRAINSTORMING_TECHNIQUE

ACTIVITY NAME	**Negative Brainstorming Technique**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	The session helps participants understand the negative brainstorming technique. This approach involves intentionally generating ideas with a negative or counterproductive focus to examine potential challenges, obstacles, or unconventional perspectives. Through organized activities, participants will gain a deeper understanding of different viewpoints and pinpoint areas in need of innovative solutions.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To introduce participants to the negative brainstorming technique. • To encourage reflection on potential challenges and limitations. • To identify areas for improvement or innovative solutions through exploring negative perspectives.

42. NEGATIVE BRAINSTORMING TECHNIQUE

EDUCATION ARCHITECTS

CHALLENGES:

NEGATIVE IDEAS:

1 _

2 _

3 _

4 _

5 _

POTENTIAL REFRAMES:

1 _

2 _

3 _

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to Negative Brainstorming (20 minutes):

Explain what negative brainstorming is and its purpose. You can use the following prompt:

Negative brainstorming is a method in which participants concentrate on producing the most unfavourable answers or recognising possible issues related to a challenge. This aids in recognising hazards, vulnerabilities, or neglected aspects, perhaps resulting in inventive and original solutions when these "negative" concepts are positively reframed.

Example: ***Educational Setting*** *(Classroom Atmosphere)*

Adverse Concept: *Making the classroom very tedious and uncomfortable to dissuade student engagement.*

Construct an interesting, adaptable learning environment featuring comfortable seats and interactive technologies to augment student motivation.

Instructions of the session:

1. Hand out the worksheets.
2. Select a broad educational challenge.
3. List negative ideas related to the challenge.
4. Fill out worksheets with diverse negative ideas.
5. Bring all groups together for a synthesis session.

2. Presenting Successfully Reframed Ideas (30 minutes):

Have each group present one or two successfully reframed ideas, sharing insights gained from the negative brainstorming process.

3. Group Discussion (20 minutes):

Lead a group discussion on how negative ideas were transformed into positive solutions, emphasizing the role of challenges in the ideation process.

4. Showcasing Transformation (15 minutes):

Showcase examples of transforming negative ideas into constructive solutions, demonstrating the importance of considering challenges for innovative outcomes.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Learn how to intentionally generate negative ideas for exploration. • Understand how negative brainstorming can lead to creative problem-solving. • Gain insights into alternative perspectives and potential challenges.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Stress the importance of generating many ideas to boost innovation chances. • Use mind mapping for visual organization and idea exploration. • Foster an environment where all ideas, even unconventional ones, are welcome. • Highlight the value of diverse viewpoints in enriching the ideation process. • Encourage ongoing refinement of ideas as new insights emerge. • Create a space for constructive feedback to enhance ideas. • Guide participants to consider how their ideas can be applied practically. • Provide templates to help articulate strengths, improvements, and innovative aspects of ideas.

TOOL 43 04_IDEATE_43_HOT_POTATO

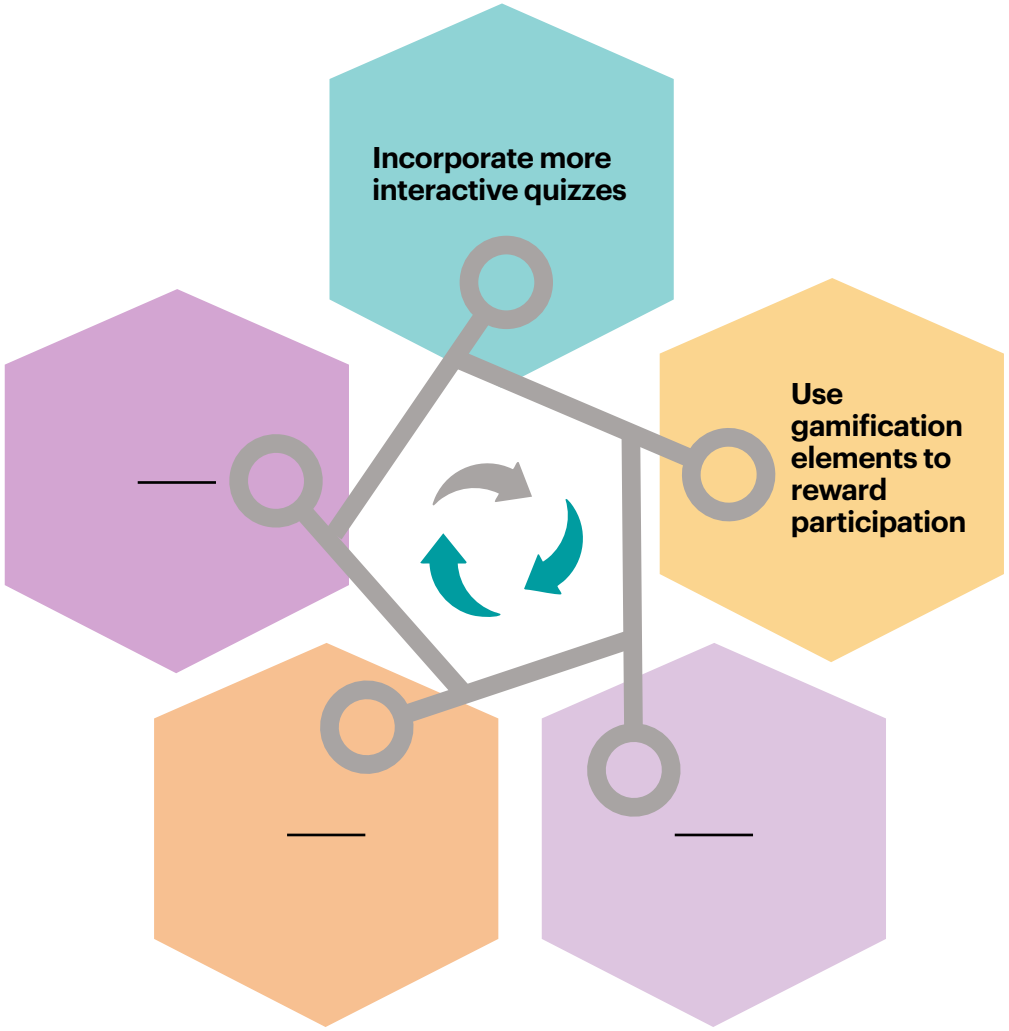
ACTIVITY NAME	**Hot Potato**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	Participants in the "Ideating with the Hot Potato Technique" scenario will learn about this dynamic brainstorming technique, which is intended to promote quick ideation and teamwork during the brainstorming phase of the design thinking process. In order to foster creativity and build on one another's contributions, participants will engage in repeated rounds of idea generating where they will pass around a designated "hot potato" object or notion. Through planned activities, participants will investigate many viewpoints and come up with creative answers to a particular problem.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • To support participants to foster quick thinking and idea sharing, emphasizing the goal of generating many ideas rapidly. • To encourage participants to expand on one another's concepts and work together to come up with creative solutions.

EDUCATION ARCHITECTS

IDEATE

43. HOT POTATO
EDUCATION ARCHITECTS

Topic to brainstorm: Improve student engagement in online learning



Materials:

Physical Object: A lightweight item (e.g., toy potato, ball, or beanbag) that can be easily passed.

Virtual Object: An online tool for virtual brainstorming (e.g., shared document or online whiteboard).

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Introduction to the Hot Potato Technique (10 min)

- Mention that The Hot Potato Object is a brainstorming tool designed to boost creativity and rapid idea generation in group sessions. It can be a physical object (like a toy potato) or an abstract concept (such as a virtual "hot potato") that cues participants to quickly share and build upon ideas.
- Provide some examples,

Example Scenarios for In-person Sessions:

Topic: *Improving Student Engagement in Online Learning.*

Participants: *Teachers and educational staff.*

Process: *The first teacher receives the Hot Potato Object and quickly suggests, "Incorporate more interactive quizzes."*

- *The object is passed to the next participant, who adds, "Use gamification elements to reward participation."*
- *This process continues, generating a wide array of ideas in a short time.*

Example Scenarios for Virtual Sessions:

Topic: *Enhancing Classroom Collaboration.*

Participants: *VET Educators and school administrators.*

Process: *The facilitator assigns the virtual hot potato via an online whiteboard tool.*

The first participant types, "Introduce collaborative group projects using digital tools."

The virtual hot potato is passed, and the next participant adds, "Schedule regular peer review sessions to foster collaboration."

Ideas are documented and shared in real-time for everyone to see and build upon.

2. Setup

- Arrange participants in a circle for easy passing or ensure access to the shared digital tool for virtual sessions.
- Decide on a fixed duration for each round of brainstorming to maintain urgency and focus.

3. Demonstration: Conduct a brief demonstration of the Hot Potato Technique using a mock scenario or example challenge.

- Establish a supportive environment where participants feel comfortable contributing and building upon each other's ideas.
- Prompt participants to generate a wide range of ideas within a short timeframe.
- Encourage participants to build upon and expand ideas presented by others.

4. Brainstorming Round:

- Introduce a specific challenge or topic for ideation.
- Pass around the designated "hot potato" object or concept.
- Each participant contributes an idea related to the given challenge as the "hot potato" is passed to them.
- Encourage rapid idea generation without judgment or critique.

5. **Reflection Round:** After the initial brainstorming session, facilitate a reflection round where participants briefly discuss the ideas generated.

6. **Iterative Rounds:**
   - Conduct multiple rounds of Hot Potato Brainstorming, allowing participants to iterate and expand upon previously shared ideas.
   - Encourage participants to enhance and refine ideas as they circulate the "hot potato". Foster an iterative ideation process where ideas evolve and improve over successive rounds.

7. **Group Discussion:** Bring the group together for a synthesis session where participants discuss the ideas generated during the Hot Potato Brainstorming rounds. Facilitate a discussion on the strengths, weaknesses, and feasibility of the ideas presented.

8. **Selection of Promising Ideas:** Encourage participants to identify and prioritize the most promising ideas for further development.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Demonstrate the ability to collaborate and build upon each other's ideas within a group setting.
- Develop proficiency in generating a diverse range of ideas within a short timeframe.
- Understand the value of iterative ideation and refinement in developing innovative solutions.
- Explore creative approaches to addressing design challenges through the Hot Potato Technique.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Make sure every participant has multiple opportunities to contribute.
- For virtual settings, use the digital tool's features to ensure equitable participation.
- Encourage an open, non-judgmental atmosphere where all ideas are welcomed.
- Emphasize that the goal is to think broadly and creatively without immediate evaluation.
- Assign a note-taker to capture ideas as they are shared.
- For virtual sessions, use the shared digital tool to automatically record contributions.
- After the brainstorming session, review the collected ideas.
- Group similar ideas and identify promising concepts for further development.
- Allow participants to pass the "hot potato" in alternative ways (e.g., verbal cue or chat feature) to support those with mobility or speech challenges.
- Include at least one round where participants intentionally build on ideas from a different perspective (e.g., a student with dyslexia or limited internet access).

TOOL 44 04_IDEATE_44_IDEA_SHOPPING_TECHNIQUE

ACTIVITY NAME	**Idea shopping technique**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	The "Ideating with the Idea Shopping Technique" session presents a collaborative ideation method that guides participants in generating and refining ideas using a structured sharing and selection process. Participants will have the opportunity to actively participate in interactive activities where they can share, evaluate, and expand upon each other's ideas. Together, they will work towards selecting and improving promising concepts to effectively tackle a specific challenge.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Participants will demonstrate the ability to collaborate and contribute to the generation and refinement of ideas within a group setting. • Participants will evaluate and assess ideas based on predefined criteria, considering factors such as feasibility, desirability, and viability.

EDUCATION ARCHITECTS

IDEATE

44. IDEA SHOPPING TECHNIQUE
EDUCATION ARCHITECTS

STEP	ACTION	DETAILS	PURPOSE
1. Idea sharing	Write down each idea on sticky notes or digital cards.	Include a brief description or title for each idea.	Capture a wide range of ideas to explore different possibilities.
2. Evaluation and Selection	Review the ideas shared by participants.	Use virtual tokens or markers to indicate promising or inspiring ideas.	Highlight the most interesting ideas for further development.
3. Idea refinement	Collaborate with others to refine the selected ideas.	Discuss factors like feasibility, impact, and alignment with user needs.	Improve ideas through collective input and practical considerations.
4. Guidelines	Respect constructive feedback, diversity and focus.	Value all ideas, offer constructive feedback, and explore diverse perspectives.	Refine the most promising ideas effectively addressing the challenge.
5. Implementation	Use a physical board to display and refine ideas.	Actively engage in contributing and refining ideas for final implementation.	Let me know if you'd like this formatted in a document or table.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Introduction (20 minutes):** Familiarize participants with the Idea Shopping Technique, which is designed to enhance group brainstorming through a structured sharing and selection process.
   - Present a specific challenge or topic on the Idea Shopping Board.
   - Have participants write down their ideas on sticky notes or digital cards and share them with the group.
   - After sharing, participants use virtual tokens or markers to vote for ideas they find most promising.
   - Allow the group to evaluate and select the best ideas together.
   - Review the top ideas selected from the Idea Shopping Session.

2. **Idea Development (30 minutes):** Work together to refine and improve these ideas, considering feasibility, desirability, alignment with user requirements, practicality and impact.

3. **Prototyping (60 minutes):** Create simple prototypes or sketches to help visualize and explain the refined ideas. Look at the refined ideas and prototypes developed in the workshop.
   - Evaluate the ideas based on factors like practicality, feasibility and impact. Help participants choose the best ideas based on thoughtful evaluation.
   - Choose the most promising idea(s) for further development.
   - Prepare to move forward with the selected idea(s) in the design process.

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Explore creative approaches to addressing design challenges through the Idea Shopping Technique.
- Gain proficiency in creating rough prototypes or sketches to visualize and communicate their ideas.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Foster a culture of constructive feedback, emphasizing the importance of both offering and receiving feedback with an open mind.
- Encourage participants to iterate on their ideas based on feedback and insights gained throughout the ideation process.
- Celebrate the diversity of ideas generated and recognize the value of different perspectives in driving innovation.
- Ensure voting tools (tokens or markers) are accessible to all participants, including those with visual or motor impairments (e.g., large print, keyboard shortcuts).
- Encourage participants to evaluate ideas not only on feasibility but also on how well they address the needs of underrepresented or marginalized users.

TOOL 45 04_IDEATE_45_IDEATING_WITH_THE_IDEA_FUNNEL

ACTIVITY NAME	**Ideating with the Idea Funnel**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	The "Ideating with the Idea Funnel" session familiarises participants with the Idea Funnel concept, a systematic approach to filtering and refining ideas in order to identify the most promising solutions. Participants will be involved in various activities to generate a diverse array of ideas, assess and rank them based on predetermined criteria, and continuously improve selected concepts to tackle a specific challenge.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to foster critical thinking and decision-making by providing tools to evaluate, filter, and prioritize ideas based on relevance, feasibility, and impact. • to support participants in refining and nurturing the best solutions to create innovative, tailored outcomes for the challenge.

EDUCATION ARCHITECTS

45. IDEATING WITH THE IDEA FUNNEL

EDUCATION ARCHITECTS

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

IDEA NO. __ :

FEASIBILITY ● ● ● ● ●
DESIRABILITY ● ● ● ● ●
IMPACT ● ● ● ● ●
ALIGMENT ● ● ● ● ●
RESOURCES ● ● ● ● ●

Explanatory note that you can print and hand to participants
Feasibility: Assesses the practicality of implementing a solution based on resources, technology, and capabilities within specified constraints.
Desirability: Focuses on how much the solution appeals to users and addresses their needs or challenges.
Impact: Evaluates the potential benefits or effects on users, the organization, or society.
Alignment with User Requirements: Ensures the solution meets users' needs and addresses their specific issues.
Resource Requirements: Evaluates the materials, budget, time, and personnel needed for development and implementation.

IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: **Introduction to the Idea Funnel (10 minutes):** Establish clear expectations for participants regarding the criteria used to evaluate and prioritize ideas. **Stage 1: Idea Generation (20 minutes)** Take a few minutes to brainstorm as many ideas as possible related to the given challenge. For example, you can explore the issue of lack of collaboration between VET schools in your region/country/Europe, etc. **Stage 2: Idea Evaluation (30 minutes)** **Criteria Identification:** Review the predefined criteria for evaluating and prioritizing ideas. Evaluate each idea based on the criteria provided. **Stage 3: Idea Refinement (30 minutes)** **Selected Idea(s) Identification:** Identify the top-ranked idea(s) for further refinement. Define additional criteria for refining the selected idea(s):. **Usability:** It is a term for how simple and natural it is for people to use a solution or product. It checks how well users can reach their goals with the least amount of trouble and work. The scalability of a solution measures how well it can handle more users or more complicated tasks without losing its usefulness or speed. **Novelty:** This word refers to how unique or original the answer is. It looks at how new or different the idea is from other options that are already out there, with a focus on creativity and originality. **Refinement** Collaborate with your team to refine and develop the selected idea(s) further. Consider how to address any weaknesses or challenges identified during the evaluation process. **Action Plan (30 minutes):** Develop an action plan outlining next steps for implementing and testing the refined idea(s). Define a timeline for executing the action plan and monitoring progress.
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Efficiently generate, evaluate, and refine ideas using the structured Idea Funnel approach. • Prioritize ideas based on feasibility, relevance, and impact, sharpening their evaluation skills. • Practice group discussions and consensus-building to select and refine the best solutions.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Encourage open dialogue and constructive feedback among participants.
- Provide clear criteria for idea evaluation and prioritization to ensure alignment.
- Guide the balance between divergent (idea generation) and convergent (evaluation) thinking.
- Emphasize the importance of refining ideas iteratively for better outcomes.
- When evaluating usability, consider whether the idea is accessible for people with different physical, sensory, or cognitive abilities.
- During refinement, ask whether the idea serves diverse user groups (e.g., age, language background, digital access) and adjust accordingly.

TOOL 46 04_IDEATE_46_MANAGING_IDEAS_WITH_IDEA_DASHBOARDS

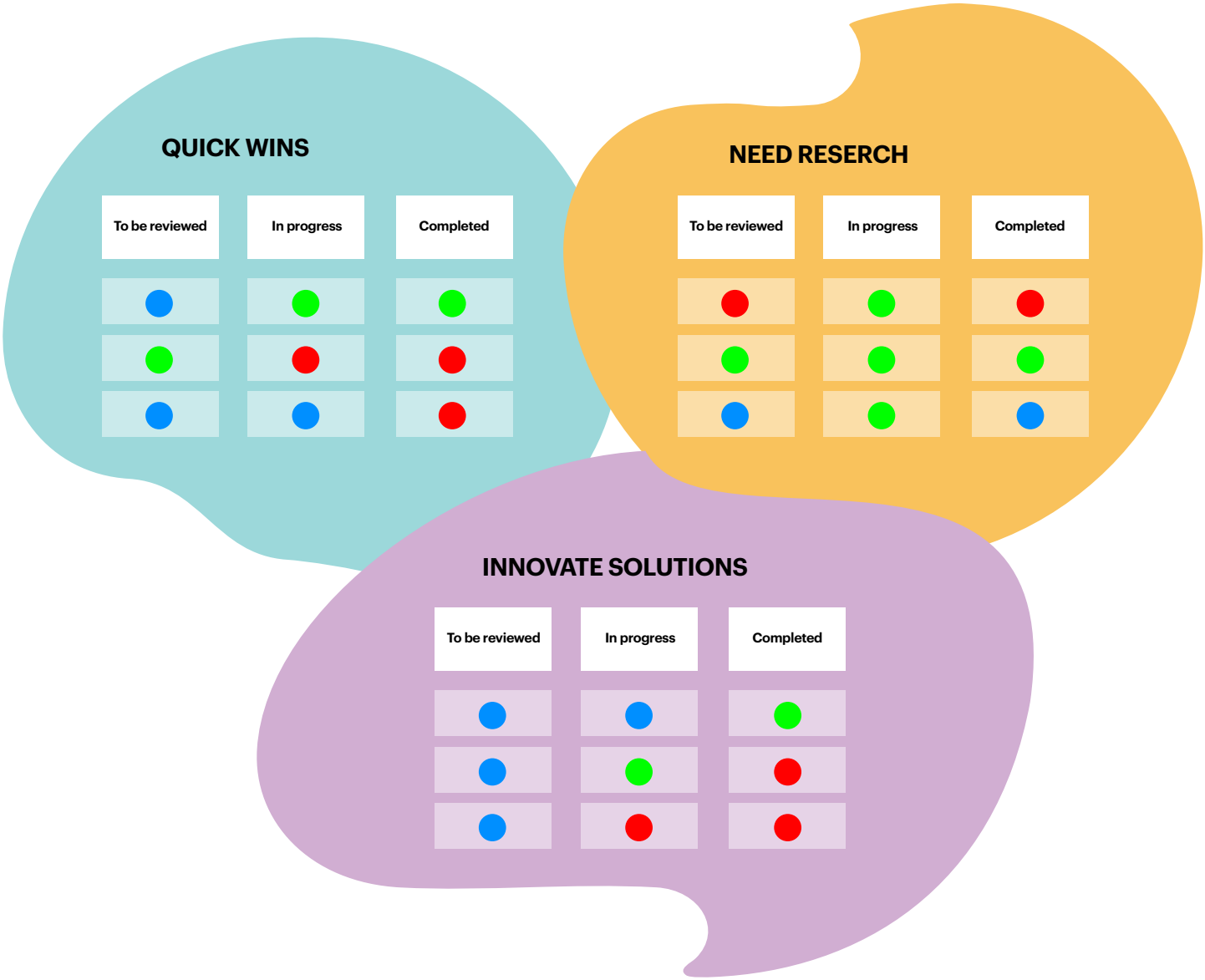
ACTIVITY NAME	**Managing ideas with an Idea Dashboard**
DESIGN THINKING PROCESS PHASE	Ideate
ACTIVITY DESCRIPTION	The **Idea Dashboard** is a centralized visual tool for organizing, tracking, and refining ideas during a design thinking process. It allows teams to categorize, prioritize, and evaluate ideas collaboratively, ensuring no valuable input gets overlooked while maintaining focus on actionable solutions.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to help teams manage large volumes of ideas effectively. • to fosters clarity, accountability, and alignment, by providing structure. • to supports decision-making by allowing participants to visualize connections between ideas, track progress, and prioritize the most impactful solutions.

EDUCATION ARCHITECTS

IDEATE

46. MANAGING IDEAS WITH AN IDEA DASHBOARD
EDUCATION ARCHITECTS

SCENARIO:



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1) Begin with a brainstorming session or review previously generated ideas. Ensure every idea is captured succinctly. Below you can find an example scenario and its relevant steps to follow:

Example scenario: ***Improving Work-Based Learning Placement Process in a VET School***

A VET school wants to improve its process for organizing and monitoring students' work-based learning (WBL) placements. After brainstorming, the team uses an Idea Dashboard to organize and prioritize their ideas.

Dashboard Setup:

- *Categories: Quick Wins - Needs Research - Innovative Solutions.*
- *Create a checklist for students before starting placements (Quick Win).*
- *Develop an online form to collect employer feedback (Innovative Solution).*
- *Interview recent students about their WBL experiences (Needs Research).*

- *Priority Levels: High Priority - Medium Priority - Low Priority.*
- *Assign "Create a checklist for students" as High Priority since it's easy to implement and useful for preparation.*
- *Mark "Develop online form" as Medium Priority due to technical requirements.*

AND Assign task:

- *Team member A is responsible for drafting the student checklist, with a two-week deadline.*
- *Team member B will explore tools to design the employer feedback form.*

- *Status Indicators: To Be Reviewed - In Progress - Completed.*

During weekly check-ins, the dashboard is updated: the student checklist moves to "Completed," and the feedback form is "In Progress."

2) Create a visual or digital dashboard. Options include physical boards with sticky notes or digital tools like Trello, Miro, or Notion.

3) Divide the dashboard into sections based on categories, priorities, or phases of development.

4) Group similar ideas or assign them to relevant categories (e.g., "Quick Wins," "Long-Term Projects," "Innovative Concepts").

5) Discuss each idea's feasibility, impact, and alignment with goals. Use voting or dot-sticking methods to rank priorities.

6) Assign labels such as "High Priority," "Low Priority," or "Hold for Later." Designate team members responsible for moving each idea forward. Include deadlines or milestones for accountability.

7) Regularly revisit the dashboard during team check-ins to update the status, refine ideas, or add new ones.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Reduce the chaos of managing numerous ideas by providing structure. • Ensure resources are focused on high-impact and feasible solutions. • Make progress visible to all team members, fostering accountability. • Encourage input from all participants while ensuring alignment.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Use a dashboard format that suits your team, whether physical or digital. • Allow all team members to contribute to categorization and prioritization. • Update the dashboard frequently to reflect the team's evolving understanding and decisions. • Avoid overcomplicating categories or statuses to keep the process efficient. • Use the dashboard as a reference during retrospectives to evaluate what worked well and what didn't. • When assigning tasks, consider team members' diverse working styles, accessibility needs, and availability to ensure fair and effective distribution. • Make the dashboard readable and usable for all; use high-contrast colours, clear icons, and alternative text for digital formats.

TOOL 47 05_PROTOTYPE_47_STORYBOARD

ACTIVITY NAME	**Storyboard**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	A storyboard is a visual tool used in the process of creating films, animations, advertisements, video games, and other visual media. It is an illustrated narrative or sequence of images that depict the order of scenes or frames, as well as the actions and dialogue that occur in the project. A storyboard is an important tool in film production and other fields where visual storytelling is essential. In design thinking, it can help creators present their ideas, plan actions and identify errors. It is useful at every stage of the process, although it is most commonly used in prototyping.
ACTIVITY OBJECTIVES	The purpose of preparing a storyboard is to create a visual tool that supports designers in various aspects of the design process. The main objectives of this activity are as follows: • Plan and organise the project: By illustrating the sequence of events, actions and dialogues, a storyboard helps to logically structure the narrative of the project. It also allows you to express ideas about the structure and layout of the solution. • Visualise the solution: With a storyboard, you can visually represent the actions, functions, interactions and other elements of the solution. This makes it easier to understand how users will use the design and how individual components will behave. • Team coordination: A storyboard serves as a reference point for the entire project team. It helps everyone understand the project's goals, expectations for appearance and functionality, and the next steps to be taken. • Identify weaknesses in the solution: Preparing a storyboard can reveal shortcomings in the designed solution, helping to identify potential problems or gaps in the narrative and functionality. • Communicating ideas and project vision: A storyboard allows ideas to be presented clearly and accessibly to both team members and clients or other stakeholders. It is an important communication tool that allows expectations for the project to be expressed and agreed upon. • A preliminary version of the prototype: Although a storyboard is not a prototype in the full sense of the word, it can serve as a preliminary visual representation of the solution, helping to understand its potential features and usage.

EDUCATION ARCHITECTS

PROTOTYPE

47. STORYBOARD
EDUCATION ARCHITECTS

IDEA

SCENE 1

SCENE 2

SCENE 3

SCENE 4

SCENE 5

SCENE 6

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Define the purpose and scope of the project (20 minutes):** Understanding what you want to achieve with the storyboard will help you focus on the essential elements and information you want to convey.
2. **Select the right tools:** Choose the tools that best suit your needs and preferences, whether traditional, such as paper and pencil, or digital, such as graphic design software.
3. **Divide the project into sequences or scenes (15 min):** Break down the project into individual parts that you want to present in the storyboard and determine what will happen in each sequence.
4. **Add images or illustrations:** Draw or paste images representing individual frames or scenes. Make sure that the images convey what you want to communicate in each sequence.
5. **Add text or descriptions:** Under each frame or image, add text or descriptions that describe the actions, dialogue, scene settings, and other relevant information.
6. **Order of images and text:** Make sure all elements are arranged in the correct order, reflecting the narrative of the project.
7. **Review and adjust:** Regularly review and adjust the storyboard as you create it to ensure that all elements are clear and logical.
8. **Consult with the project team or stakeholders:** Review and discuss the storyboard with the project team or stakeholders to ensure that everyone is on the same page regarding the content and purpose of the project.
9. **Use the storyboard as a guideline:** During the production of your visual project, use the storyboard as a reference point for planning shots, settings, scenery, and direction. Each frame should help you realise the project as intended.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- A detailed prototype sketch: The storyboard visually presents the sequence of scenes or frames of the prototype, which helps you understand how the solution will look in practice. This gives you a better idea of the flow of interactions and the functionality of the design.
- A visual representation of the solution: Each frame of the storyboard is a graphical representation of a specific element of the prototype, making it easier to understand its appearance and function. This tool helps you visualise the design, both for yourself and for other team members.
- A tool for communicating with stakeholders: A storyboard serves as an effective tool for communicating with project stakeholders, such as the client or sponsor. It allows them to better understand the concept of the designed solution, which facilitates decision-making and the expression of opinions.
- A tool for streamlining the prototype preparation process: Thanks to the careful planning of the project visualisation using a storyboard, errors and problems during prototype production can be avoided. This contributes to the effective preparation of the prototype, which in turn speeds up the design process and reduces costs.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- **Planning and concept:** Before you start creating your storyboard, it's a good idea to spend some time carefully planning your concept and script. Make sure you have a clear picture of what you want to convey with your storyboard so that the final product is coherent and understandable.
- **Adapt to the audience:** Think about who the storyboard is for and adapt it to their needs and expectations. If the storyboard is for a client, you may want to include different elements than you would for a presentation to your project team.
- **Clarity and simplicity:** Keep the frames you create clear and simple. Avoid overly complicated drawings or descriptions to make it easier for your audience to understand the content. Try to use clear, legible graphics and short, concise descriptions.
- **Include details:** Although simplicity is important, it is also important to include relevant details about the solution you are presenting. Details help to present the design clearly and accurately and enable a better understanding of its functions and interactions.

TOOL 48 05_PROTOTYPE_48_PROTOTYPING_CARD

ACTIVITY NAME	**Prototyping Card**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	A prototype card, also known as a 'project card' or 'design card', is a tool used in the design process, during the prototyping phase. It is a document containing information about the designed solution, which helps to understand and describe its main features. The card is a tool used both in the planning phase and in the visualisation phase of the project. It supports communication about the designed prototype and provides consistency and guidelines for the entire design team. The card usually contains information about the name of the solution, its description, target audience, the purpose of the prototype (it may include a hypothesis to be verified during testing) and a set of questions to be answered when preparing the prototype.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • **Clear visualisation of the designed solution:** The prototype card helps us see what our design will look like before it is created. It is a plan that shows us what we need to do to make our idea a reality. • **Early validation of the designed solution:** Thanks to the prototype, we can check whether our idea works before investing a lot of time and money in its full creation. The prototype card allows us to see whether everything we imagine makes sense and is feasible. • **Reduction of errors:** Planning a project with a prototype card allows us to identify potential problems and errors before they arise. This helps us avoid trouble and achieve better results. • **Support for communication and understanding of the designed solutions:** A prototype card facilitates discussions within the project team and with stakeholders, as all the most important information is clearly defined. This ensures that everyone is on the same page and understands what the project is about. • **Streamlining prototype preparation:** The prototype card is like a roadmap for our project. It allows us to better plan what to do and how to do it in order to complete our project. • **Testing process planning:** The prototype card can also help us plan how we will test our project. We can determine what questions we want to ask and what aspects of the solution we want to test. This helps us gather as much useful information as possible and improve our project before its final version.

EDUCATION ARCHITECTS

PROTOTYPE

48. PROTOTYPING CARD
EDUCATION ARCHITECTS

NAME OF THE SOLUTION PROTOTYPE

DESCRIPTION OF THE SOLUTION

WHO IS THE USER OF THE SOLUTION PROTOTYPE

GOAL OF PROTOTYPING / HYPOTHESIS BEING TESTED

QUESTIONS WE WANT TO ANSWER

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Select the format of the prototype card (15 min):** Decide whether you want to create a physical card, an electronic document or a multimedia presentation. Choose the format that best suits your project and the needs of your team.
2. **Enter the project title (5 min):** At the top of the card, enter the name of your project and basic information such as the prototype version, author and date.
3. **Add a section describing the project (10 min):** Provide a general description of the project that includes key information about what you want to create. Describe the main features and functions of the project so that the reader can understand what it is about.
4. **Define the prototype audience (10 minutes):** Indicate who your prototype is intended for. Is it an end user, a customer, or perhaps another member of the project team?
5. **Define the goal of prototyping and the hypothesis to be verified (15 min):** What goal do you want to achieve with this prototype? Also, specify what hypothesis you want to verify by testing the prototype.
6. **Create a list of questions (15 min):** List the questions you want to answer when testing the prototype. These questions will help you focus on key aspects of the project and collect relevant data.
7. **Share the prototype card (15 min):** Once you have completed the prototype card, share it with your project team and stakeholders. Make sure everyone has access to the information on the card and understands what the project is about.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- **A project description:** The prototype card contains a comprehensive description of the project, including its purpose, scope, target audience and context in which it will be used. This allows anyone interested to easily understand what the project is about.
- **A list of prototype objectives and hypotheses:** The information contained in the prototype card describes the objectives of the prototype and formulates hypotheses that will be verified during testing. These objectives and hypotheses are crucial for the effective preparation and testing of the prototype.
- **A list of questions about the prototyped solution:** The prototype card also includes a list of questions about the prototyped solution. These questions are important both during the preparation of the prototype and during the testing phase, as they help to understand which aspects of the project need to be verified and investigated during testing.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Clarity and precision: Make sure that the prototype card is clear and contains only relevant information. Avoid overcomplicating the content to ensure that all recipients can easily understand the purpose of the project and its main features.
- Usefulness and purpose: The prototype card should be useful and purposeful, helping the design team and stakeholders understand the project. Make sure it provides relevant information that is understandable to all interested parties.
- Prototype visualisation: Consider visually representing the prototype on the card. Use graphics, illustrations or diagrams to better illustrate the features and characteristics of the designed solution. Visualisation can help the design team and stakeholders better understand the design.

TOOL 49 05_PROTOTYPE_49_IMPLEMENTATION_ROADMAP

ACTIVITY NAME	**Implementation Roadmap**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	An implementation roadmap, also known as an implementation plan, is a strategic document that outlines the schedule and concept for the introduction of a specific project, product, service or organisational change. An implementation roadmap is an extremely useful tool for the project team and stakeholders, helping them to plan, manage and execute projects, especially those that involve multiple stages and require a strategic approach. Typically, such a map may include a schedule of implementation activities, implementation priorities, persons responsible for implementing individual elements of the solution, resources, implementation objectives and success indicators.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to help you plan, organise and realise your project step by step. It tells you what needs to be done, in what order, who is responsible for it and when it should be ready. It is a key element of project management – it allows the team to stay on track, monitor progress and work according to the schedule. A roadmap not only organises and prioritises tasks but also facilitates communication within the team and engages its members in the implementation. In addition, it enables ongoing progress monitoring and quick response to any issues that may arise.

EDUCATION ARCHITECTS

PROTOTYPE

49. PROTOTYPING CARD
EDUCATION ARCHITECTS

	STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
DESCRIPTION					
WHO IS RESPONSIBLE?					
RESOURCES					
OBJECTIVE					
SUCCESS RATES					

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Identify **who the project stakeholders are**, what their expectations are, and what their involvement and impact on the project is (20 minutes).
2. **Conduct an analysis** to understand the needs and challenges that the project is intended to address. Determine what benefits it is expected to bring (20 minutes).
3. **Prioritise the project objectives** according to their importance and urgency. Select which objectives will be pursued first (20 min).
4. **Define a schedule of activities (15 min).**
5. **Define the scope of each implementation phase in detail**, specifying what will be delivered and what the success criteria will be (20 min).
6. **List the resources that will be needed**, including personnel, technology, finances, and others. Allocate an appropriate budget for the project (15 min).
7. **Assign responsibility for each stage** of implementation to members of the project team. Specify who is responsible for achieving each goal (10 min).
8. **Determine how you will monitor the progress of the project and what evaluation criteria you will use** to assess whether the objectives are being achieved (15 minutes).

Example: Implementation of a hybrid learning programme at a logistics technical college

Context

A vocational school decides to introduce a hybrid (partly remote) learning programme for students at a logistics technical college. The aim is to improve access to specialised content and make educational pathways more flexible.

Implementation roadmap – stages

1. **Identification of stakeholders**
2. School management, vocational teachers, students, parents, labour market partners (e.g. logistics companies), education authority.
3. **Needs analysis**
4. Students have limited access to work experience, there is a lack of flexibility in learning, and some teachers have no experience of working online.
5. **Setting goals and priorities**

   Priority 1: Launching an e-learning platform.

   Priority 2: Training teachers to conduct online classes.

   Priority 3: Test implementation of hybrid classes on one vocational module.

1. **Action schedule:**

Month 1: Needs analysis and platform selection;

Months 2–3: Teacher training;

Months 4–5: Pilot hybrid module;

Month 6: Evaluation and decision on scaling up.

2. **Scope of implementation and success criteria**

– Coverage: students in grades II–III of the logistics technician programme

– Success: at least 80% of students actively participate, 70% of teachers implement elements of remote learning

3. **Resources and budget**

– Computer equipment, Internet access for students

– Licences for e-learning platforms

– Funds from EU funds/school budget

4. **Division of responsibilities**

– Management: supervision and budget

– Teacher-implementer: coordination of the pilot

– IT specialist: technical support

5. **Progress monitoring**

– Weekly implementation team meetings

– Surveys for students and teachers

– Evaluation report after 3 months

This plan allows for the thoughtful introduction of changes in vocational education, taking into account resource constraints, the pace of change in education and the real needs of students and teachers.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- A solution implementation schedule: The implementation roadmap will provide you with a chronological action plan that specifies when and what steps will be taken during the project implementation. This will allow you to effectively plan the next stages and monitor progress.
- A set of implementation priorities: The roadmap defines the order in which objectives will be achieved, allowing you to focus on the most important tasks. This will help the team focus on key areas and make progress in a logical and orderly manner.
- The scope of implementation activities: With a roadmap, you will have a clearly defined scope for each stage of implementation, making it easier to determine exactly what will be delivered as part of the project. This will help avoid ambiguity and ensure clarity about expectations.
- A list of resources needed to implement the solution: The roadmap identifies the resources needed, such as personnel, technology, finances and others, as well as the budget allocated to the project. This will give you a complete picture of the resources needed and ensure that they are allocated appropriately.
- Monitoring and evaluation criteria: The roadmap defines the criteria for assessing implementation progress and how to monitor achievements. You will be able to regularly assess the progress of the project and take appropriate corrective action if necessary.
- A tool for documenting changes in the implementation process: The implementation roadmap documents the activities in the implementation process, making it easier to track the history of the project and adapt the implementation work to the needs and expectations of stakeholders. This will give you a clear picture of changes and progress in the project, facilitating communication within the team and with stakeholders.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Identify stakeholders: Before you start creating a roadmap, it is a good idea to identify the most important stakeholders and understand their expectations and influence on the project. Tailoring the roadmap to the needs of different groups will help ensure the success of the project.
- Realistic approach: Be realistic when preparing your roadmap. It is important to avoid excessive optimism, which can lead to missed deadlines. A realistic approach will allow for better planning and achievement of goals within the set time frame.
- Monitor progress: It is worth preparing tools to monitor implementation progress. Regular monitoring will allow you to verify on an ongoing basis whether implementation is going according to plan. This will enable you to respond quickly to any problems and ensure that deadlines are met.
- Consult with the team and stakeholders: The implementation roadmap should be consulted with the project team and stakeholders. Their perspective can provide valuable insights and comments that can help improve the implementation plan and ensure the success of the project.
- Contingency plan: When preparing the implementation roadmap, it is also a good idea to create a contingency plan. Consider a risk management strategy and prepare an action plan in case of unforeseen difficulties. This will allow you to be prepared for potential problems and minimise their negative impact on the project.

TOOL 50 05_PROTOTYPE_50_BUSINESS_MODEL_CANVAS

ACTIVITY NAME	**Business Model Canvas**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The Business Model Canvas is a tool developed by Alexander Osterwalder that helps companies better understand and describe their business models. It consists of nine key components that allow for a clear presentation of how a company or organisation creates and delivers value: customer segments, value propositions, distribution channels, customer relationships, key resources, key activities, key partnerships, revenue streams and costs. The business model canvas is a tool often used in the strategic planning process and helps companies analyse and develop their business models. It makes it easy to understand how a company creates value for its customers and generates revenue, which is critical to business success. The business model canvas is useful in design thinking during the preparation stage of a solution for implementation.
ACTIVITY OBJECTIVES	The main objective of using business model canvas is to create a clear and compact picture of a company's or project's business model. The Business Model Canvas helps to better understand and plan activities, adapt them to market changes and achieve market advantage. The business model canvas allows you to evaluate a company's business model or solutions, facilitates internal communication within the team, allows you to plan strategic activities and better understand your customers. The greatest value of the business model canvas is that it allows you to precisely define what value you offer to your customers.

EDUCATION ARCHITECTS

PROTOTYPE

50. BUSINESS MODEL CANVAS
EDUCATION ARCHITECTS

PARTNERS
WHO IS OUR PARTNER?

KEY ACTIVITIES
WHAT ACTIONS DO WE TAKE?

KEY RESOURCES
WHAT RESOURCES DO WE TAKE?

VALUE PROPOSITION
WHAT DO CUSTOMERS BUY FROM US?

CUSTOMER RELATIONSHIPS
WHAT DO CUSTOMERS BUY FROM US?

CHANNELS
HOW DO WE REACH CUSTOMER?

CUSTOMER SEGMENTS
WHO IS OUR CUSTOMER?

COST STRUCTURE
WHAT ARE THE MOST IMPORTANT COSTS?

REVENUE STRUCTURE
WHAT DO WE MAKE MONEY ON?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. Start by defining who your customers are (15 minutes). Identify different customer groups that may have different needs and preferences.
2. Next, define your value propositions (20 minutes). Define what value you want to deliver to your customers. What problems do you want to solve or what benefits do you want to offer?
3. Select distribution channels (15 min). Determine how you will deliver your products or services to customers. Will it be through brick-and-mortar stores, online, partners, or other channels?
4. Identify customer relationships (15 minutes). Describe the relationships you want to build and maintain with your customers. Are you focusing on customer service, automation or other approaches?
5. Identify key resources (20 min). List the resources that are essential for the company to operate. These may include personnel, technology, physical and intellectual assets.
6. Define key activities (20 min). Describe the key activities you need to undertake to deliver your value proposition to customers.
7. Identify key partnerships (10 min). Identify external partnerships that support the functioning of the company by providing resources, know-how or access to customers.
8. Identify revenue streams (10 min). Specify how you plan to generate revenue. Will it be through direct payments, subscriptions, product fees or other sources of income?
9. Specify costs (10 min). Describe in detail all costs associated with the company's operations, both fixed and variable.

Example of using the Business Model Canvas for an e-learning platform:

Context:

An e-learning platform offering programming courses for beginners wants to define and optimise its business model to attract users more effectively, increase engagement and achieve sustainable growth.

Step 1: Key elements of the Business Model Canvas
1. Customer Segments:
- Beginner programmers (students)
- Professionals looking to change careers
- Companies and organisations looking for training for their employees
- Parents buying courses for their children
2. Value Proposition:
- Interactive programming courses tailored to different skill levels
- Gamification elements to increase engagement and motivation
- Ability to learn anywhere, anytime
- Industry-recognised course completion certificates
3. Channels:
- Platform website
- Mobile app
- Partnerships with universities and training companies
- Social media and online advertising

4. Customer Relationships:
- Personalised technical and educational support
- Discussion forums and support groups
- Regular newsletters with news and tips
- Loyalty programmes for regular users

5. Revenue Streams:
- Monthly and annual subscription fees
- One-time fees for access to individual courses
- Fees for certificates
- Advertising and sponsored educational content

6. Key Resources:
- Team of programming and e-learning experts
- Technology platform (website and mobile app)
- Educational materials (videos, quizzes, simulations)
- Partnerships with industry experts and educational institutions

7. Key Activities:
- Creation and updating of educational content
- Maintenance and development of the technology platform
- Marketing and promotion of courses
- Customer service and technical support

8. Key Partnerships:
- Universities and educational institutions
- Technology companies and industry organisations
- Online payment platforms
- Programming specialists and course authors

9. Cost Structure:
- Costs of creating and updating educational content
- Costs of maintaining the technology platform
- Marketing and promotion costs
- Salaries for the team and experts

Step 2: Analysis and optimisation of the business model

Based on the identified elements of the Business Model Canvas, the team can conduct an analysis to understand which areas need optimisation and how the value offered to customers can be increased.

1. Customer segments:

-Consider expanding customer segments, e.g. adding courses for advanced programmers.

-Analyse the needs of individual segments and tailor course content to those needs.

1. Value proposition:

-Improve the interactivity of courses by introducing new technologies such as virtual reality (VR).

-Adapt courses to market trends, e.g. introduce new programming languages.

2. Distribution channels:

-Increase social media presence through advertising campaigns and

collaboration with influencers.
-Develop the mobile app to make it more intuitive and offer more features.

3. Customer relations:
-Introduce chatbots for faster customer query handling.
-Organise regular webinars and Q&A sessions with experts.

4. Revenue streams:
-Introduction of freemium models, where basic courses are free and advanced courses are paid.
-Offering companies training packages for their employees with volume discounts.

5. Key resources:
-Investing in team development through training and courses.
-Developing partnerships with leading technology companies.

6. Key activities:
-Regularly update course content to keep it in line with the latest trends and technologies.
-Develop analytics features on the platform to better understand user behaviour.

7. Key partners:
-Strengthen partnerships with universities and companies to offer courses created by top experts.
-Acquiring partners to co-create educational materials.

8. Cost structure:
-Optimising marketing costs by using analytical tools to target campaigns.
-Automating administrative processes to reduce operating costs.

Summary
The business model canvas is a tool that allows for a holistic understanding and planning of activities. By analysing individual segments of the canvas, the team can identify areas for optimisation and innovation, which contributes to increasing the value offered to customers and achieving a competitive advantage in the market.

OUTCOMES	By the end of the activity, learners will have gained the ability to acquire: • Customer segments. The business model canvas identifies different customer groups, their needs and characteristics. • Value proposition. Thanks to the business model canvas, you know what value to deliver to customers, what problems to solve or what benefits to offer. • Distribution channels. The canvas allows you to determine how you can deliver value, e.g. through online stores, partners, brick-and-mortar stores, etc. • Customer relationship principles. The business model canvas helps you define the relationships you will build and maintain with your customers, e.g. through direct contact, automation, etc. • A list of key resources. The canvas allows you to identify the resources necessary to run your business, such as personnel, technology, physical and intellectual assets. • A list of key activities. The business model canvas allows you to describe the key activities that the company must undertake to deliver its value propositions to customers. • A list of key partnerships. The canvas allows you to identify which external partnerships support the company's activities by providing resources, know-how or access to customers. • Sources of income. The canvas makes it possible to determine how income will be generated, e.g. through product sales, subscriptions, platform access fees, etc. • A list of costs. The business model canvas allows you to accurately present all costs associated with the company's operations, both fixed and variable.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • When creating a business model canvas, it is worth focusing on the key aspects of the business model. • When filling in the individual sections of the business model canvas, it is worth formulating proposals in a clear and brief manner, avoiding generalisations. • When creating a business model for a company or solution, do not limit yourself to filling in the fields in the table. It is worth including information that explains why certain solutions have been chosen and what consequences they may have. • When preparing a business model for a company or solution, do not be afraid to experiment with different options and scenarios. The business model canvas is a tool that allows you to easily test different ideas. • When creating a business model for a company or solution, focus primarily on defining the value for the customer. The customer should be at the centre of the business model.

TOOL 51 05_PROTOTYPE_51_CONCEPT_SKETCH

ACTIVITY NAME	**Concept sketch**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The **Concept Sketch** is a visual method that analyses concepts through initial drawings to understand how they work. It is the first step in turning an idea into reality
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to generate, visualize, communicate, and iterate on design ideas, facilitating creativity, problem-solving, decision-making, and user-centred design.

EDUCATION ARCHITECTS

PROTOTYPE

51. CONCEPT SKETCH
EDUCATION ARCHITECTS

NAME OF THE CONCEPT

EXPLANATION OF THE CONCEPT

PAIN THAT RESOLVES TO THE USERS

WHY IS THIS IDEA USEFUL?

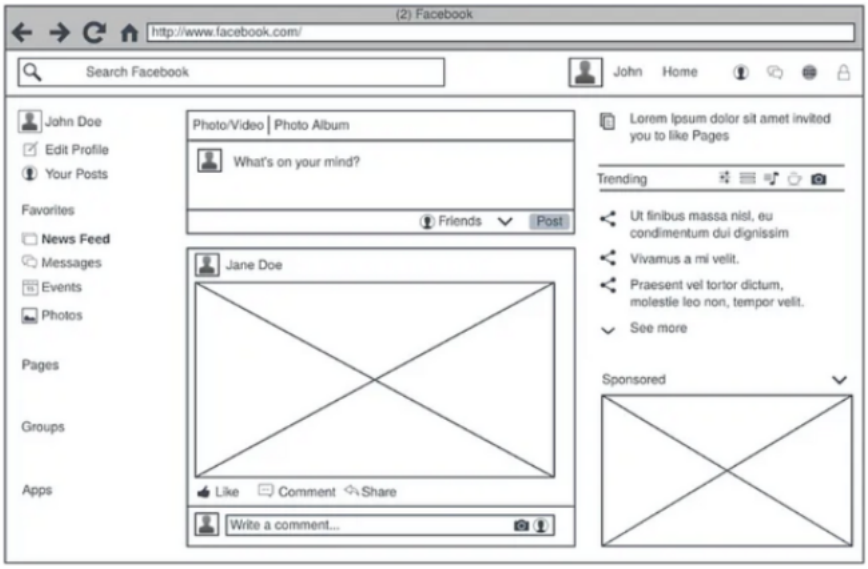
IMAGE

IMPLEMENTATION STEPS	To successfully implement this activity, you can follow the steps below: **1. Introduction to concept sketch activity (10 minutes):** • Explain the purpose and benefits of this activity • Provide examples to illustrate how this activity will help **2. Understand the Problem (10 minutes):** • Before you start sketching, ensure you have a clear understanding of the problem or challenge you're addressing. Consider the user needs, constraints, and goals. **3. Define Key Features (20 minutes):** • Identify the essential features or elements that your concept should include. These could be functionalities, interactions, or visual components. We capture all the meaning, goals and functioning of the project/idea/product **4. Start Sketching (30 minutes):** • Begin by sketching rough outlines and shapes to represent the overall layout and structure of your concept. Focus on capturing the essence of your idea rather than detailed rendering. We need a sketch that it's easily understandable by anyone. **5. Presentation (10 minutes):** • Present your concept sketches in a clear and engaging manner. Use annotations or accompanying notes to provide context and explain key design decisions.
OUTCOMES	By the end of the activity, learners will have gained the ability to: • Effectively use Concept Sketches as they play a vital role in the design process, serving as a versatile tool for idea exploration, communication, problem-solving, collaboration, evaluation, and documentation. • Visualize, communicate, and refine their design ideas, ultimately leading to more successful and impactful design solutions.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Don't worry about making perfect sketches. Focus on communicating your ideas effectively, even if your sketches are rough or imperfect. • Practice regularly to improve your sketching skills and develop your unique style. • Stay open to feedback and be willing to iterate and refine your designs based on insights gained through the process.

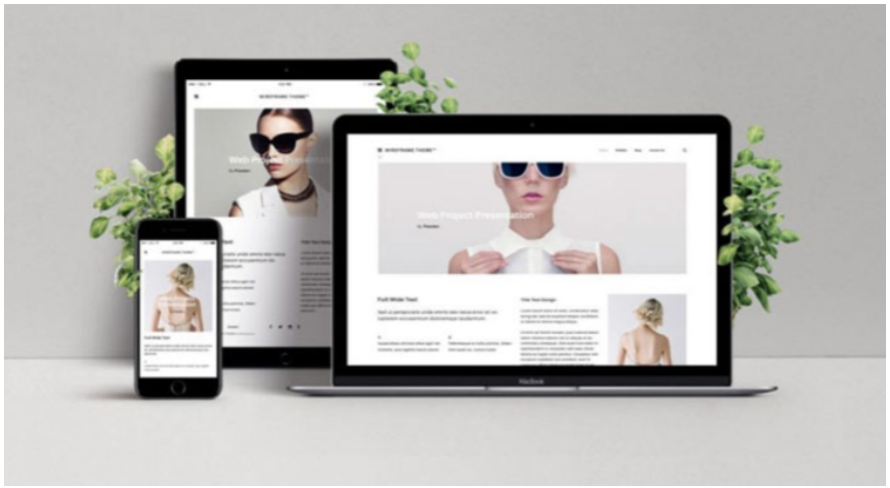
TOOL 52 05_PROTOTYPE_52_MOCK_UP

ACTIVITY NAME	**Mock-up**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The Mock-up activity is a visual method that analyses concepts through a painting or collage to help describe an idea. It is a visualization strategy that is more complex than the concept sketch and represents a second stage of designing. Creating a mock-up involves visualizing a design concept in a tangible form, typically as a low-fidelity representation of the final product.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to further develop the final appearance and form of an idea or concept. We try to imagine our ideas in a static way through certain specific features and generating an explanatory prototype that simulates its use. In this way, the user already sees in detail how the concept will be, even if it does not work as such yet. It can also be used for web app and smartphones apps. It is the interface In product design this will be the 3D prototype It can also be used for packaging.

52. MOCKUPS
EDUCATION ARCHITECTS



Example: How a web will look like on different devices.



You can use Canva, Figma or any other design app.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Define Objectives:** Clearly outline the purpose and objectives of the mock-up. Understand what you aim to achieve with the mock-up, whether it's testing a design concept, gathering feedback, or presenting ideas to stakeholders.

2. **Gather Requirements:** Collect all necessary requirements and specifications for the mock-up. This includes understanding the target audience, user needs, design constraints, and functional requirements.

3. **Sketch Initial Concepts:** Start by sketching out rough ideas and concepts for the mock-up on paper or using digital sketching tools. Focus on layout, structure, and key elements of the design.

4. **Choose Tools:** Select the appropriate tools for creating the mock-up based on your preferences and project requirements. This could include graphic design software like Adobe XD, Sketch, Canva, Figma, or even simple tools like pen and paper.

5. **Design Visual Elements:** Add visual design elements to your product frame to create a more polished look and feel. Use colours, typography, icons, and imagery to enhance the visual appeal of the mock-up while maintaining clarity and usability.

6. **Add Interactivity (Optional):** Depending on the complexity of the mock-up and your objectives, consider adding interactive elements to simulate user interactions and workflows. This could include clickable buttons, navigation links, and interactive form fields.

7. **Review and Iterate:** Review the mock-up to ensure it aligns with the project requirements and objectives. Gather feedback from colleagues, users, or team members and iterate on the design as needed to address any issues or concerns.

8. **Finalize and Present:** Once you're satisfied with the mock-up, finalize the design and prepare it for presentation or testing. Create documentation or annotations to explain key features and functionality and present the mock-up to peers or users for feedback or approval.

This activity can take approximately 1 to 1.5 hours in total.

OUTCOMES	By the end of the activity, learners will have gained the ability to acquire: • Visualization and Communication Skills: Mock-ups provide a clear visual representation of design concepts, aiding communication among stakeholders. • Feedback and Iteration Skills: Mock-ups enable early feedback from stakeholders and users, allowing for iterative refinement of the design. • Cost and Time Savings Understanding: By identifying issues early, mock-ups help prevent costly revisions later in the development process. • Risk Reduction Skills: Mock-ups allow designers to experiment with different ideas and solutions, reducing the risk of investing in ineffective designs. • User Engagement and Buy-In Understanding: Involving users in the mock-up review process increases engagement and leads to better-designed products. • Alignment with Requirements Skills: Mock-ups ensure that the final product meets project requirements and objectives. • Empowerment of Designers Skills: They empower designers to explore creativity and innovation in a low-risk environment.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Focus on user experience: Prioritize usability and intuitive navigation. • Keep it simple: Avoid clutter and unnecessary complexity. • Consistent design: Maintain consistency in colours, fonts, and layout. • Iterate based on feedback: Continuously refine the mock-up through testing and feedback. • Visual polish: Enhance visual appeal with colours, imagery, and typography. • Test with real users: Validate design decisions through user testing. • Document and collaborate: Document the design process and collaborate with stakeholders for input.

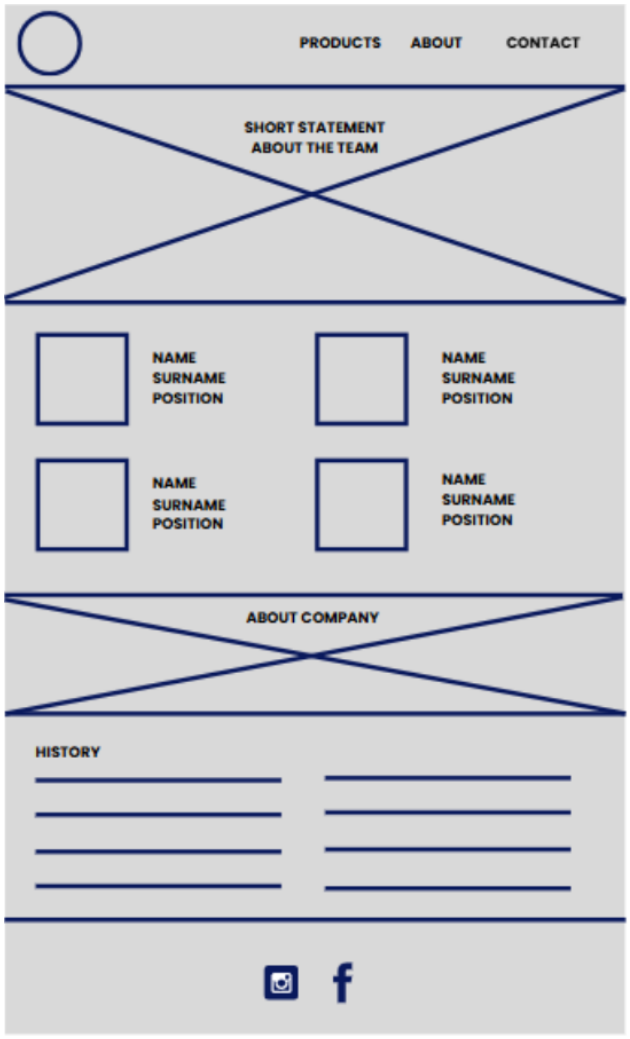
TOOL 53 05_PROTOTYPE_53_WIREFRAMES

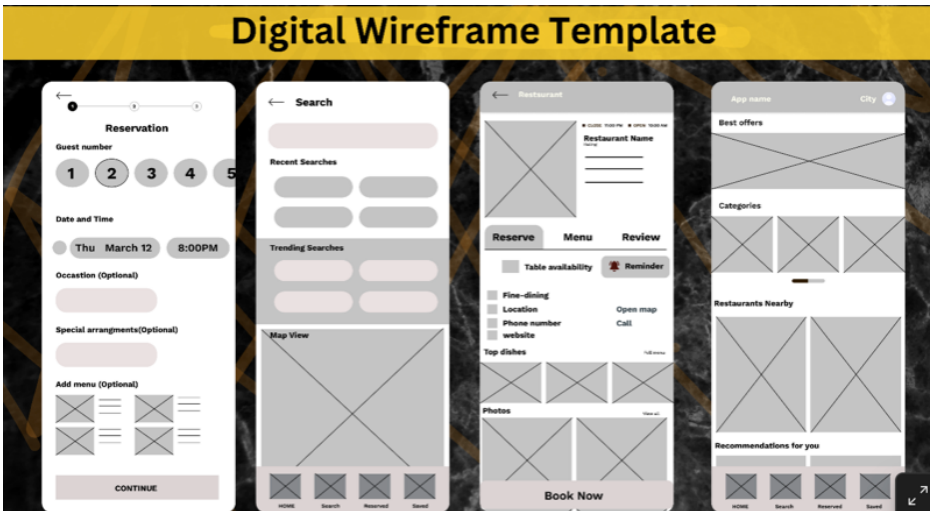
ACTIVITY NAME	**Wireframes**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	Wireframes are design schemes for the organization of the contents of an interface. We are talking about a navigation system that indicates the overall functioning of a website.
ACTIVITY OBJECTIVES	Wireframes are a basic tool for defining how our interface operates—both when we want to understand and determine everything that needs to be included in the interface, and to conduct quick tests with users. A wireframe presents the visual structure without fully developed content. This allows us to understand the sequence of steps during a specific task, the decisions users need to make, and any possible alternative processes. This tool is for a digital product/service. It would be interesting, many services can be considered, for example, hosting foreign students by local families, a kind of free micro-Erasmus+ projects. Or perhaps a tool to promote social projects that are somehow related to subjects taught in schools. In the end, in all these projects you are looking for a large number of users to support your project or use your service, with this prototyping tool we want the experience of using the digital tool to be as simple and intuitive as possible. As a prototyping tool can be further simplified and even made with sheets of paper and cut-outs.

EDUCATION ARCHITECTS

PROTOTYPE

53. WIREFRAMES
EDUCATION ARCHITECTS





IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1. **Choose the wireframe:** is it going to be a website, a smartphone or a tablet wireframe?

2. **Choose Tools:** Select the appropriate tools for creating the wireframe based on your preferences and project requirements. This could include digital tools like wireframing software (e.g., Sketch, Adobe XD, Figma), Canva, Miro or pen and paper for sketching.

3. **Select all the sections you want to include:** some of the sections that could be included are:
   - Header: Logo and navigation menu.
   - Hero Section: Large headline, brief description, and a call-to-action button.
   - Features Section: Three-column layout showcasing key features
   - About Section: Brief overview of the company.
   - Testimonials Section: Customer testimonials in a carousel/grid
   - Call-to-Action: Prominent button encouraging user action.
   - Footer: Contact information, social media links, and copyright info.

4. **Create Basic Layout:** Develop the basic layout of the wireframe, outlining the placement of key elements and content sections. Focus on creating a clear and logical flow for the user interface.

5. **Add Detail and Annotations**: Gradually add more detail to the wireframe, including text labels, annotations, and notes to explain functionality or interactions. Use placeholder text and simple shapes to represent content and interactive elements.

6. **Test and Validate:** if you can test the wireframe with other users to gather feedback on usability and user experience. Use this feedback to make further improvements and refinements to the wireframe before finalizing it.

7. **Share and present:** present the wireframe to colleagues or users for feedback or approval.

OUTCOMES

By the end of the activity, learners will have gained the ability to acquire:

- Clarity and Focus: Wireframes provide a clear, uncluttered view of the website or app layout, helping teams focus on the structure and functionality without being distracted by visual design elements.
- Early Feedback: They facilitate early feedback from stakeholders, clients, and users, allowing for quick iterations and adjustments to the layout and user flow before investing in detailed design or development.
- Cost and Time Savings: By identifying and addressing usability issues and design flaws early on, wireframes help prevent costly revisions and rework during later stages of development, saving
- Alignment among users and team members.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Prioritize clarity and simplicity.
- Focus on functionality over visual design.
- Use placeholders to represent content.
- Keep it flexible for easy iterations.
- Test usability early and often.
- Collaborate with stakeholders for feedback.
- Follow industry best practices.
- Document annotations for clarity.
- Maintain consistency throughout.

TOOL 54 05_PROTOTYPE_54_HYPOTHESIS_MATRIX

ACTIVITY NAME	**Hypothesis Matrix**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The Hypothesis Matrix is a logbook that helps us to prepare for the trial/error experiment and to define its outcome.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to identify the key hypotheses or main points that support our product/ service/company concept. • to determine the values or metrics to be considered when accepting a positive or negative result.

54. HYPOTHESIS MATRIX
EDUCATION ARCHITECTS

HYPOTHESIS	PROTOTYPE	POSITIVE ASPECTS	NEGATIVE ASPECTS
	1		
	2		
	3		
	4		
	5		

An example of a service for hosting foreign students in local families.

Hypothesis Prototype Positive aspects Negative aspects

The visiting students prefer to pay a small fee for some of their accommodation expenses and thus have much more freedom and free time.

1 It makes the experience more attractive for both the visitors and the host family.

Certain students would find it more difficult to take up the program.

The visiting students prefer not to pay anything even if it means losing some of their free time helping in the house management tasks.

2 it could facilitate greater integration and would be useful for all types of students.

It is difficult to quantify possible household chores and this could generate uncertainty.

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below: It should take around 60 minutes in total.

1. **Define the Problem or Objective (10 minutes):** Clearly articulate the problem or objective that you're seeking to analyse through the hypothesis matrix activity. This could be related to product development, process improvement, or any other business challenge.

2. **Identify Variables (5 minutes):** Identify the key variables or factors that you are hesitating about. These could include customer behaviours, market trends, internal processes, external factors, etc.

3. **Formulate Hypotheses (20 minutes):** Generate hypotheses that express potential cause-and-effect relationships between the variables.

4. **Create the Matrix (5 minutes):** Create a matrix with the variables listed along the rows and columns. This matrix will serve as a framework for organizing and analysing the hypotheses.

5. **Fill in the Matrix (20 minutes):** Populate the matrix by placing each hypothesis in the cell that corresponds to the variables it relates to. Each hypothesis should be positioned where the variables it involves intersect. Create different hypothesis in one column, name them (Prototype column) and set positive and negative aspects for each.

6. **Draw Conclusions (10 minutes):** Draw conclusions based on the results of the hypothesis matrix to make a final decision on the prototype you are choosing, and share it with the rest of the participants

OUTCOMES

By the end of the activity, learners will have gained the ability to:

- Explore potential cause-and-effect relationships.
- Generate actionable insights.
- Make informed decisions to address business challenges or achieve objectives.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Focus on user experience: Prioritize usability and intuitive navigation.
- Keep it simple: Avoid clutter and unnecessary complexity.
- Consistent design: Maintain consistency in colours, fonts, and layout.
- Iterate based on feedback: Continuously refine the mock-up through testing and feedback.
- Visual polish: Enhance visual appeal with colours, imagery, and typography.
- Test with real users: Validate design decisions through user testing.
- Document and collaborate: Document the design process and collaborate with stakeholders for input.

Helpful tips for leading this activity in VET settings:

- Start with a clear problem statement. Important to focus on the problem, the cause not the effects. For example, the problem is not absenteeism, perhaps the problem, its cause, is lack of student motivation, for example.
- Identify key variables. Identify the variables that affect this problem, for example economic aspects, family view, peer perception, teacher support, etc....
- Formulate testable hypotheses. Remember that a hypothesis is simply a preconceived idea that needs to be tested, so hypotheses must be testable. If my hypothesis is that absent students would attend classes if their family had positive values towards effort, it may be a complicated hypothesis to validate. But if our hypothesis is that if we propose a more participatory, group and community-based teaching model, absenteeism will be lower, perhaps it is something more measurable.
- Prioritize hypotheses based on their impact and feasibility. In other words, those with a high, experimentally verified impact will be our priority working hypotheses.
- Consider alternative explanations. As if we were using the scientific method, a phenomenon can occur for multiple reasons, propose multiple hypotheses and then test them.
- Use a visual representation. This helps communication with the whole group.
- Involve stakeholders. It is not an office job; it is a testing job with people involved in the product/service/project we are developing.
- Design rigorous tests. Indicators must be reliable to validate or not our initial hypotheses.
- Iterate and refine hypotheses. Rarely will we get our hypotheses right the first time, even if we do get it right, with testing and data analysis of the various tests we can refine them.
- Document and communicate results. We must emphasize that we are already in the testing phase, and it is important that the whole process is well documented since we can always go backwards, reconsider doubts or question data that do not convince us completely.
- Be open to revision. As we move forward, we always check what we have discovered or learned and verify that the tests have been done correctly.
- Learn from failure. Every wrong hypothesis or every piece of data that does not agree with our initial ideas is a help to improve in the next step.

TOOL 55 05_PROTOTYPE_55_PROTOTYPING_THINK_OUT_LOUD

ACTIVITY NAME	**Think Out Loud**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The “Think Out Loud” activity encourages participants to verbalize their thoughts, decisions, and reasoning processes in real time while tackling a task or solving a problem. It helps uncover underlying assumptions, thought patterns, and biases that influence decision-making.
ACTIVITY OBJECTIVES	The goal of this activity is to gain insight into individual or team cognitive processes. It aids in identifying pain points, discovering hidden challenges, and fostering empathy by understanding how different people think and approach problems. This tool is particularly useful in user experience research, team collaboration, and r eflective practice.

EDUCATION ARCHITECTS

PROTOTYPE

55. THINK OUT LOUD
EDUCATION ARCHITECTS

DEFINE SPECIFIC PROBLEM, TASK OR SCENARIO:

GUIDING PROMPTS:

- "WHAT DO YOU NOTICE ON THE HOMEPAGE?"
- "WHAT ARE YOU TRYING TO FIND FIRST?"
- "WHY DID YOU CLICK ON THAT SECTION?"
- "IS ANYTHING CONFUSING OR UNEXPECTED?"
- "WHAT WOULD MAKE THIS PROCESS EASIER FOR YOU?"

OBSERVATION:

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction to Think Out Loud

1 - Present a specific task, scenario, or prototype for the participant to work on. Ensure it is well-defined but open enough to elicit reflective thinking. You can use the example given below:

Example: Using an Online Tool to Submit a Job Application
A VET school is testing a new digital platform designed to help students apply for internships or jobs. To gather insights, they conduct a "Think Out Loud" session with a student navigating the platform.

Scenario setup:
"Imagine you've just completed your CV and now need to apply for a work-based learning placement using the online portal. Please go through the steps to submit your application and share your thoughts out loud as you do it."

Guiding Prompts:

- What do you notice on the homepage?
- What are you trying to find first?
- Why did you click on that section?
- Is anything confusing or unexpected?
- What would make this process easier for you?

2 - Explain to participants that they need to verbalize every thought, decision, and observation as they perform the task. Encourage honesty without fear of judgment.

3 - Use guiding questions sparingly to maintain focus, such as:

- What are you thinking now?
- Why did you choose this approach?
- What stands out to you?

4 - Take notes or record the session to capture thought patterns, areas of confusion, or key insights. Use this for post-session analysis.
After the session, engage in a discussion with the participant or team to explore key observations and reflections. Use these insights to refine designs, approaches, or strategies.

5 - Summarize the results, focusing on recurring themes, unique perspectives, or unexpected discoveries that inform the next stages of the design process.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Understand user needs, frustrations, and motivations. • Use the tool properly so it reveals thought patterns, assumptions, and decision-making logic. • Identify potential pain points or confusing areas in a design or process. • Foster openness and shared understanding within teams.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Encourage openness and reassure participants that there are no right or wrong answers. • Avoid influencing participants with leading questions or reactions during the session. • Focus on what participants are saying rather than immediately jumping to conclusions. • Silence is okay—give participants time to gather their thoughts and speak naturally. • Tailor the activity to the participant's level of comfort, using more structured prompts if necessary. • Use insights from the session to inform the next round of testing or brainstorming. • Offer alternative ways to express thoughts (e.g., writing, typing, or using symbols) for participants who may be non-verbal or experience speech difficulties. • Make sure the prototype or task is accessible to users with visual, motor, or cognitive differences—test with screen readers, keyboard navigation, or simplified language if needed.

TOOL 56 05_PROTOTYPE_56_3D_PROTOTYPING

ACTIVITY NAME	**3D Prototyping**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	In this activity, participants will engage in hands-on 3D modelling and prototyping activities. They will learn how to create physical prototypes using simple 3D modelling software and 3D printers. This activity allows participants to identify design flaws, test functionality, and gather user feedback, encouraging iterative improvement.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Participants will understand how 3D prototyping helps solve real-world problems through prototype creation. • Participants will work together, share ideas, and improve their designs based on feedback. • Participants will apply these techniques to real-world challenges and improve their design process through iteration.

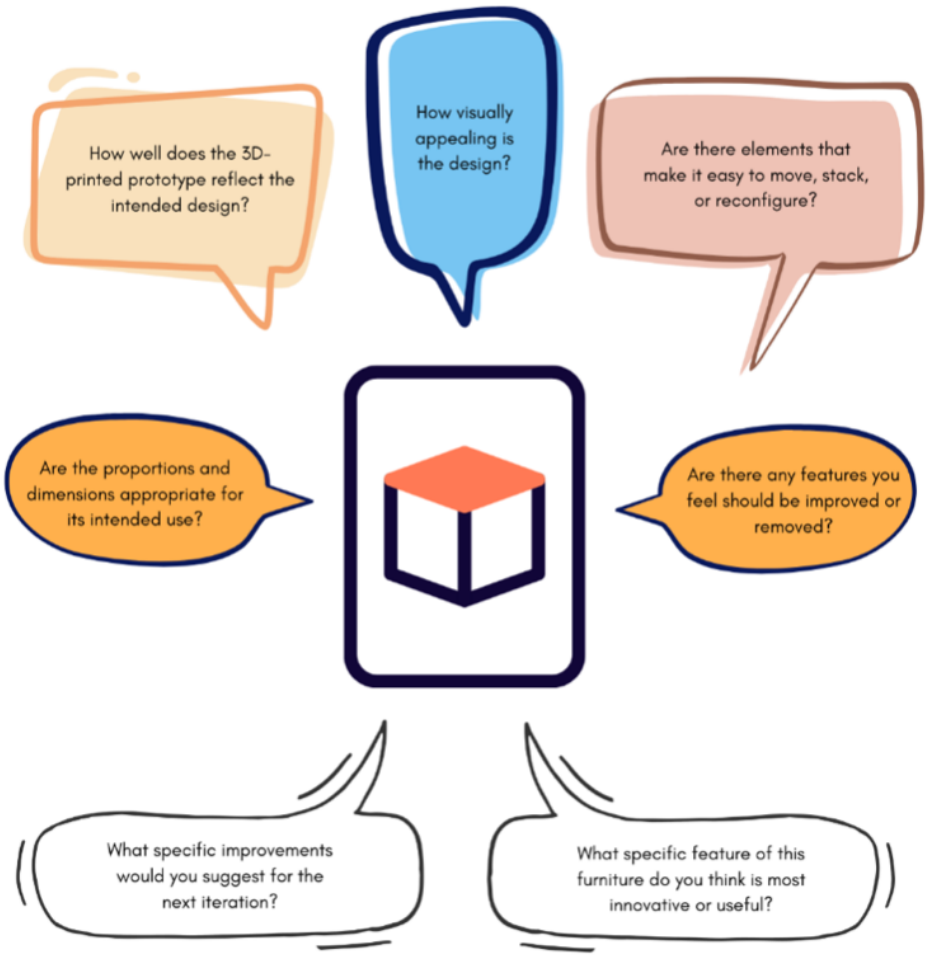
EDUCATION ARCHITECTS

56. 3D PROTOTYPING
EDUCATION ARCHITECTS

3D Prototyping TOOLKIT

3D Modelling Software
- Tinkercad: Beginner-friendly tool to create simple 3D models.
- SketchUp: Good for design-focused projects.

3D Printer: Use a simple, classroom-friendly 3D printer with basic materials like PLA filament.
Computer or Tablet: Ensure access to devices that support 3D modelling software.
Workspace Setup: Designate a clean area for working with both the software and physical 3D printer.



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

1.Introduction to 3D Prototyping:
Introduce participants to 3D prototyping through simple examples and visual presentations.

Example: Improving Classroom Furniture Design

Goal: *Use 3D prototyping to address classroom needs, such as designing better student desks.*

Presentation: *The VET teacher/trainer presents a scenario where students complain about uncomfortable desks. Through images or videos, they show how a 3D prototype of a new desk can be quickly designed and modified using feedback from teachers and students.*

Prototyping Process: *Participants are shown a step-by-step guide on how to design a simple desk model, with features like adjustable height or added storage compartments. They also learn how the prototype can be tested and improved based on user feedback.*

2. **3D Modelling Workshop:** Step-by-step guide on how to use basic 3D modelling software like Tinkercad. Participants will create their first 3D models.

3. **Prototype Design and Printing:** Participants tackle a design challenge (e.g., creating a functional object). Participants will print their first prototype and observe the process in action.

4. **Prototype Testing and Iteration:**
Peer review of prototypes to gather feedback and suggest improvements. Participants refine their designs and reprint based on feedback.

OUTCOMES

Participants will master basic 3D modelling tools. They will develop creative solutions through hands-on prototyping.

Understand how feedback leads to better prototypes through iteration. Improve teamwork by sharing ideas and giving/receiving constructive feedback.

TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS

Helpful tips for leading this activity in VET settings:

- Start with **simple activities** to introduce 3D modelling tools.
- Encourage **creativity** by allowing participants to experiment freely.
- Foster a **collaborative environment** where participants feel comfortable sharing ideas.
- Use **real-world examples** to show the application of 3D prototyping in problem-solving.
- Reflect on **feedback** to iterate and improve the design process continuously.
- Provide tactile materials or 2D printouts of 3D models for participants with visual impairments to explore shape and structure through touch.
- Offer keyboard-friendly or simplified versions of 3D software for learners with motor or cognitive challenges.

TOOL 57 05_PROTOTYPE_57_PAPER_PROTOTYPING

ACTIVITY NAME	**Paper Prototyping**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The **Paper Prototyping** activity gives participants a chance to quickly create basic models of their ideas using paper and simple tools. This allows them to test and improve their designs easily without needing advanced materials or technology. The activity focuses on the importance of getting feedback from users early, so participants can make changes and improve their ideas quickly. It encourages creativity and helps participants think about how their design will work before making a more detailed version.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Participants will learn about paper prototyping as a quick and easy way to explore and improve design ideas. • Real-world examples will show how useful and flexible paper prototypes can be inspiring participants to use this method in their own projects.

EDUCATION ARCHITECTS

PROTOTYPE

57. PAPER PROTOTYPING
EDUCATION ARCHITECTS

Paper Prototyping Tool Kit

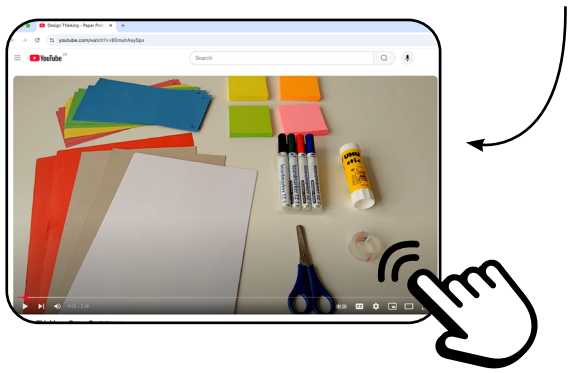
Paper Variety:
- **Blank Sheets:** Various sizes (e.g., A4, A3) for drawing and sketching.
- **Index Cards:** For creating separate components or notes.
- **Sticky Notes:** For quick modifications and annotations.
- **Coloured Paper:** To represent different elements or sections in prototypes.

Writing Utensils:
- **Pens and Markers:** For detailed drawing and annotation (including various colours for different elements).
- **Pencils:** For initial sketches and easy erasing.
- **Highlighters:** To emphasize important features or changes

Basic Prototyping Supplies:
- **Scissors:** For cutting paper into required shapes and sizes.
- **Tape:** To temporarily adhere pieces together.
- **Glue:** For more permanent attachments and adjustments.
- **Rulers:** To measure and create straight edges and precise dimensions.
- **Stencils or Templates:** For consistent shapes and designs.

Organizing Materials:
- **Storage Trays or Boxes**: To keep all materials organized and easily accessible.
- **Labelling Supplies:** To tag different components or sections of the prototype.

Design Thinking - Paper Prototypes Explanatory Video



EDUCATION ARCHITECTS

PROTOTYPE

57. PAPER PROTOTYPING
EDUCATION ARCHITECTS

EASE OF USE

- Is the design intuitive to use? Can you easily imagine interacting with it in a real-world scenario?
- Are there any steps or features that feel confusing or unnecessary?

WORKFLOW AND INTERACTION

- Does the layout or sequence of features make sense?
- Are there areas where the user's interaction could be simplified or improved?

IMPROVEMENT

Write here all the improvements that can be made to your prototype.

PRACTICALITY

- Does this design seem feasible to implement or use in its intended context?
- Are there any aspects that might be impractical or unrealistic?

ADAPTABILITY

- Does the design seem flexible enough to adapt to different use cases or users?
- Are there opportunities to streamline or simplify the design without losing its essence?

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction to Paper Prototyping

- Arrange materials on tables to ensure easy access for all participants.
- Provide a designated space for working on prototypes and a separate area for collecting feedback and refining designs.

Usage Guidelines:

Paper Prototyping Workshop

Participants will work on creating paper prototypes for specific design challenges.

They will use templates or prompts to sketch out ideas and create prototypes, working together to come up with creative solutions.

Participants will practice drawing and building simple prototypes and learn to make quick changes within a set time. They will explore different design ideas through quick paper prototyping, encouraging creativity and new ways of thinking.

Prototype Testing and Iteration

Participants will test their paper prototypes with peers or users.

They will exchange their prototypes with others and observe how people interact with their designs, gathering feedback on what works and what needs improvement.

By receiving input, participants will learn what to improve in their prototypes and how to make them better. Based on the feedback, participants will refine their prototypes, making adjustments to meet user needs.

Presentation and Reflection

Participants will present their final paper prototypes and reflect on their design journey.

They will share their prototypes with the group, explaining the ideas behind their designs and the changes they made along the way.

Participants will discuss what they learned, the challenges they faced, and the insights they gained. They will also learn from each other's experiences.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Learn to quickly improve their prototypes by making changes based on feedback and testing. • Develop skills in working together, giving and receiving feedback, and using peer insights to improve their designs. • Practice solving design problems through rapid prototyping, addressing issues early in the process. • Become better at turning abstract ideas into visual sketches and prototypes and documenting their design decisions. • Focus on understanding user needs and creating prototypes that solve real problems, involving users in the feedback process. • Understand how paper prototyping fits into the bigger picture of design thinking, alongside other stages like idea generation and user research.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Encourage participants to use a variety of paper types and supplies to explore different prototyping approaches. • Remind participants to keep their prototypes simple and focus on the core functionality and user experience. • Use sticky notes for iterative feedback and quick changes, making it easy to adapt prototypes based on user testing and insights. • Present examples from real projects that will spark participants' creativity and show how paper prototypes can lead to great design solutions. • Ensure participants have the help and tools they need throughout the prototyping process, offering guidance when necessary. • Offer thicker paper, larger markers, or pre-cut shapes for participants with fine motor challenges to ensure comfortable participation. • Encourage participants to include features that make their prototypes accessible—such as large labels, simple navigation cues, or inclusive imagery.

TOOL 58 05_PROTOTYPE_58_PAPER_WIREFRAMING

ACTIVITY NAME	**Paper Wireframing**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The "Paper Wireframing" activity familiarises participants with the process of creating wireframes using basic materials made of paper. By engaging in a variety of interactive activities, participants will gain the skills to create preliminary designs for both digital interfaces and physical products. This activity highlights the significance of wireframing as a valuable tool for visualising and refining design concepts in the early stages of the prototyping process.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • to teach participants key techniques for creating effective wireframes, focusing on layout, navigation, and user flow. • to emphasize considering user interaction to create intuitive designs. • to provide opportunities for participants to create paper wireframes, applying wireframing principles in a practical setting. • to encourage participants to draft and revise wireframes, exploring different design options.

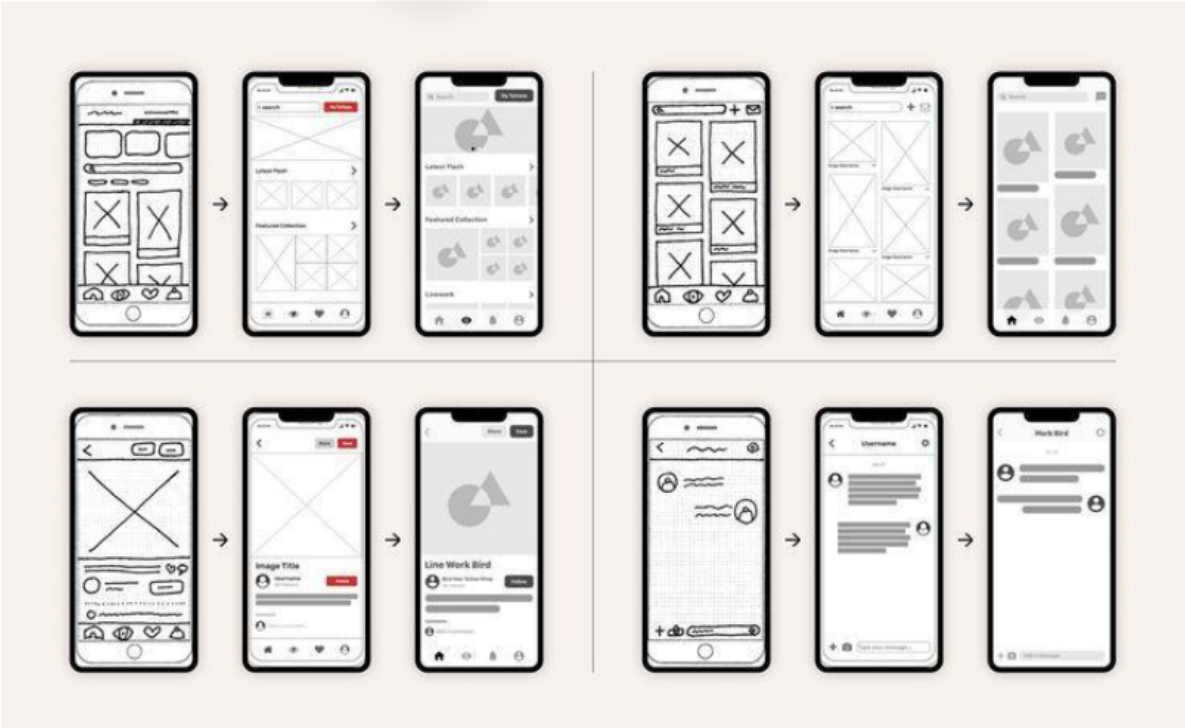
EDUCATION ARCHITECTS

PROTOTYPE

58. PAPER WIREFRAMING
EDUCATION ARCHITECTS

Material:
Paper / Pens / Markers / Rulers, etc.

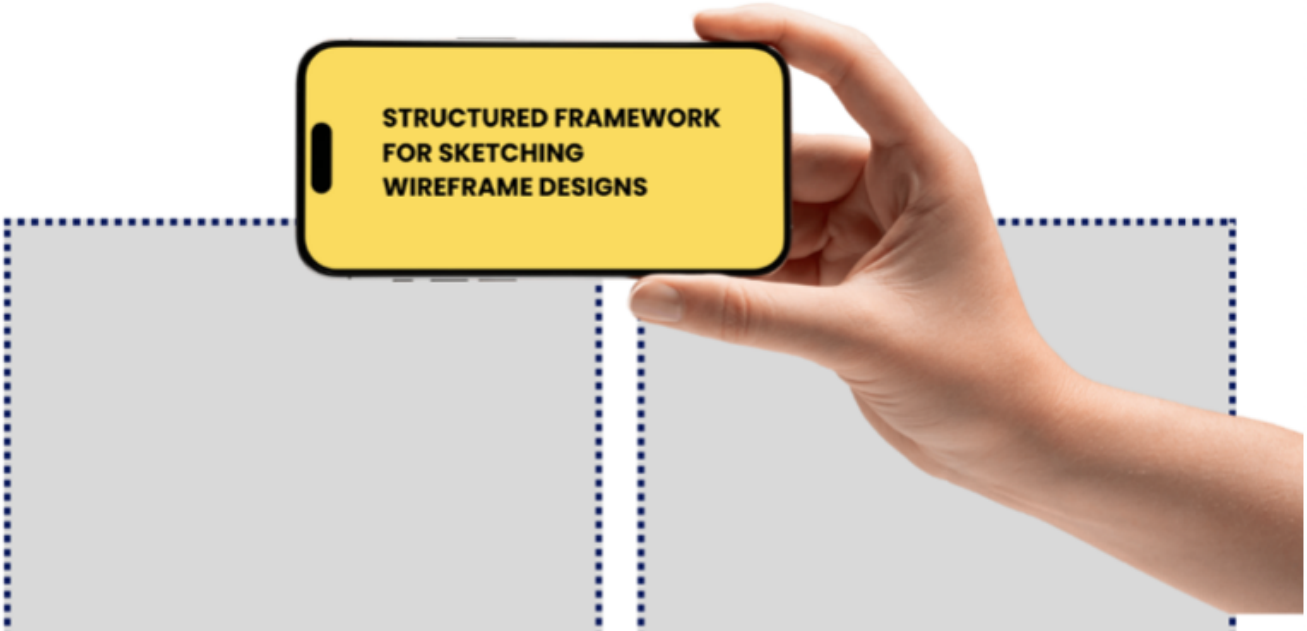
Example of wireframe:



EDUCATION
ARCHITECTS

PROTOTYPE

58. PAPER WIREFRAMING
EDUCATION ARCHITECTS



IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction to Paper Wireframing

Introduce participants to the basics of wireframing, highlighting its role in visualizing and organizing design concepts. Explain how wireframes act as blueprints for both digital interfaces and physical products, laying the foundation for further development.

Ensure participants grasp the fundamentals of wireframing, including its purpose, benefits, and common elements.

Inspire participants by showcasing real-world examples of wireframes, demonstrating how they translate design concepts into tangible visual representations.

Paper Wireframing Workshop

1. Provide participants with paper, pens, markers, rulers, and other basic prototyping supplies.
2. Present participants with design challenges or scenarios, such as designing a website homepage or a mobile app interface.
3. Guide participants through the process of sketching wireframes on paper, emphasizing the importance of simplicity, clarity, and usability in design layouts.
4. Encourage participants to experiment with different layout configurations, content arrangements, and interaction patterns through rapid iteration.

Feedback Session:

Facilitate peer review sessions where participants exchange wireframes with each other for feedback and critique. Encourage participants to provide constructive feedback focusing on clarity, usability, and alignment with user needs and goals.

Guide participants in conducting usability testing sessions, where they observe how users interact with their wireframes and gather insights for refinement.

Enable participants to incorporate feedback from testing sessions to iteratively refine their wireframes, making adjustments to improve clarity, usability, and effectiveness.

Foster a user-centred design approach by encouraging participants to consider user needs and preferences in refining their wireframes.

Presentation and Reflection

Participants present their wireframes, explaining their design choices and iterations. Facilitate a group discussion where participants share experiences, challenges, and insights. Encourage peer learning through showcasing wireframes and discussing design approaches.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Develop hands-on skills in creating paper wireframes for both digital interfaces and physical products. • Experiment with different layouts and design elements to build functional structures. • Focus on user needs, learning to integrate feedback into wireframes. They will be refined to better meet user requirements through feedback. • See wireframing as the first step toward more detailed prototypes. • Learn how to transition from wireframes to high-fidelity prototypes.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Motivate participants to explore different layouts and interaction patterns, fostering creativity in design. • Highlight the importance of refining wireframes based on feedback from testing sessions. • Create a collaborative space for participants to share ideas, insights, and feedback, enhancing learning and knowledge sharing. • Provide printed templates with pre-drawn frames or grids to support participants who may struggle with drawing or spatial planning. • Encourage participants to consider accessibility from the start, such as adding large buttons, high-contrast sections, or alt-text placeholders in their wireframes.

TOOL 59 05_PROTOTYPE_59_ROLE_PLAY

ACTIVITY NAME	**Role Play**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The "Role Play" activity is designed to fully engage participants in simulated scenarios, allowing them to take on various roles and viewpoints relevant to the subject matter. By engaging in interactive role-playing activitys, participants will have the opportunity to gain valuable insights into different perspectives, develop their empathy skills, and explore potential solutions to real-world challenges.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Use role-playing to help participants understand different viewpoints, fostering empathy and addressing others' needs effectively. • Encourage creativity by using role play to brainstorm and test new ideas in different scenarios, promoting innovative problem-solving. • Immerse participants in realistic scenarios to apply theory in practical ways, bridging the gap between learning and real-world use. • Provide opportunities for participants to refine skills in a dynamic, practical setting. • Improve communication by practicing negotiation, collaboration, and idea sharing in varied role-playing activitys. • Promote teamwork through group role-playing, helping participants understand team dynamics and work together to solve problems. • Equip participants with skills and insights that can be applied in real-world situations, enhancing empathy and problem-solving abilities.

EDUCATION ARCHITECTS

PROTOTYPE

59. ROLE PLAY
EDUCATION ARCHITECTS

STEP 1

Determine the goals of the role-play

STEP 2

Select the context or situation

STEP 3

Identify and describe the characters

STEP 4

Define the location and materials needed

STEP 5

Determine the goals of the role-play

STEP 6

Gather props and role cards

STEP 7

Conduct and manage the role-play session

STEP 8

Review and discuss the role-play outcomes

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction to Role Play: Introduce the concept of role play and its significance in experiential learning and empathy building.

Discuss the objectives of the session and the benefits of engaging in role-playing activities.

Demonstration: Provide a brief demonstration or example of role play to illustrate how it works and set expectations for participants.

Example of role-play scenario:

One person plays a student having trouble using the platform to turn in assignments, while another plays a teacher offering help on how to find resources and submit the work.

The student is confused about finding assignments and the submission process, so the teacher provides clear instructions. The design team looks at where the student struggles and how clear the teacher's instructions are, finding usability issues.

Participants should engage honestly, showing real student-teacher interactions, to identify issues that impact the learning experience and propose improvements.

Context Setting: Provide participants with a clear understanding of what role play entails and its relevance to the session objectives. Engage participants by demonstrating the interactive and immersive nature of role play as a learning tool.

Scenario Exploration

1. Present participants with a series of scenarios or case studies relevant to the session topic.
2. Choose scenarios that involve multiple stakeholders or perspectives to encourage diverse role play experiences.
3. Assign roles to participants based on their interests, background, or random selection using role cards.

Role Play Session: Conduct role-playing activities, allowing participants to immerse themselves in the scenarios, interact with other participants in their roles, and explore different viewpoints. Enable participants to adopt different perspectives and understand the motivations, needs, and challenges of various stakeholders. Enhance communication skills as participants engage in dialogue, negotiation, and problem-solving within the context of the scenarios.

Debriefing: Facilitate a debriefing session after each role play activity, allowing participants to reflect on their experiences, insights gained, and challenges encountered. Encourage critical thinking as participants analyse complex scenarios, make decisions, and navigate interpersonal dynamics during role play.

Brainstorming Session: Following the role play activities, facilitate a brainstorming session where participants collectively generate ideas and solutions based on their insights and experiences.

Solution Exploration: Translate insights from the role play scenarios into actionable ideas and solutions to address real-world challenges.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Better understand and relate to different viewpoints and challenges through role play. • Learn to see things from various perspectives, understanding the needs and concerns of others in complex situations. • Strengthen their ability to analyse role play scenarios, evaluate options, and make decisions despite limited information. • Explore ethical dilemmas and responsibilities, understanding their impact in decision-making.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Foster a supportive space where participants feel comfortable expressing themselves and taking on roles. • Design role-play scenarios that are relevant, realistic, and engaging for participants. • Give participants enough time to prepare for their roles with necessary background information. • Ensure everyone is actively engaged in the role play, intervening when needed to maintain inclusivity. • Encourage participants to apply the skills and insights gained in real-world situations, offering resources for further exploration. • Adapt roles or provide written prompts for participants who may be uncomfortable performing verbally or publicly (e.g., through reading scripts or small-group versions). • Design scenarios that reflect diverse experiences—include characters of different ages, cultural backgrounds, learning abilities, and access levels to digital tools.

TOOL 60 05_PROTOTYPE_60_STUDENT-CENTRIC_ASSESSMENT_STRATEGIES

ACTIVITY NAME	**Student - centric assessment strategies**
DESIGN THINKING PROCESS PHASE	Prototype
ACTIVITY DESCRIPTION	The "Student-Centric Assessment Strategies" session delves into the exploration and experimentation of cutting-edge assessment techniques that prioritise active student participation, valuable feedback, and measurable learning outcomes. Participants will have the opportunity to actively participate in practical activitys aimed at creating and assessing student-centred evaluation methods that are specifically designed for a wide range of learning settings.
ACTIVITY OBJECTIVES	The main objectives of this activity are as follows: • Explore and prototype alternative assessment strategies that shift the focus from traditional testing to student-centred approaches, promoting deeper learning and understanding. • Design assessment methods that actively engage students in the learning process, fostering motivation, autonomy, and ownership of their learning journey.

EDUCATION ARCHITECTS

PROTOTYPE

60. STUDENT - CENTRIC ASSESSMENT STRATEGIES
EDUCATION ARCHITECTS

ASSESSMENT STRATEGY	ENGAGEMENT LEVEL	FEEDBACK QUALITY	ALIGNEMENT WITH OBJECTIVES	SCALABILITY
Peer-Assessment	HIGH	MODERATE	HIGH	MEDIUM
Self-Assessment	MODERATE	HIGH	HIGH	HIGH
Project-based Assessment	HIGH	HIGH	HIGH	LOW
Performance Assessment	HIGH	HIGH	HIGH	MEDIUM

IMPLEMENTATION STEPS

To successfully implement this activity, you can follow the steps below:

Introduction to Student-Centric Assessment

Introduce student-centric assessment, highlighting its benefits for deeper learning and student engagement.

Facilitate discussion on challenges of traditional assessments and the need for innovative approaches. Inspire participants to adopt innovative strategies focused on student needs and learning goals.

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Example scenario:

Ms. Elena, a VET instructor in the field of Hospitality and Tourism, wants to move away from traditional written exams and implement more student-centred assessment methods that reflect real-world skills and better support her students' diverse learning needs.

Student-Centric Assessment Strategies:

1. **Choice-Based Projects:** Students demonstrate their understanding of customer service by choosing one of the following: role-playing a client interaction, designing a welcome brochure for a hotel, or recording a video tour of a hospitality venue.

Why it works: Students select the method that aligns with their strengths and career goals, making learning more relevant and practical.

2. **Peer Feedback:** After presenting their projects, students provide constructive feedback to classmates using a simple evaluation rubric focused on communication, professionalism, and content.

Why it works: Peer feedback enhances communication skills and promotes a supportive learning environment.

3. **Self-Reflection:** Students keep a short reflective journal where they describe what they learned during practical sessions, what challenges they encountered (e.g., dealing with a difficult customer), and how they plan to improve.

Why it works: Reflection encourages critical thinking and personal growth based on real-life experiences.

4. **Ongoing Quizzes:** Instead of one final assessment, Ms. Elena conducts mini-evaluations throughout the module on key competencies like setting up a table, using reservation systems, or handling complaints.

Why it works: Continuous assessment helps catch problems early and keeps learning steady.

5. **Student-Led Conferences:** At the end of the course, students showcase a complete service scenario (e.g., managing a check-in desk or leading a guided tour), presenting their skills to the instructor and industry guests.

Why it works: Students take ownership of their learning and show responsibility for their progress.

Results: These strategies increase engagement, mirror real-life vocational challenges, and support continuous improvement through reflection, practice, and feedback.

Evaluate Existing or Proposed Strategies: Use the matrix to assess assessment strategies by evaluating them on specific criteria. Look at factors such as:

- Engagement Level: How well does the strategy capture and maintain students' interest?
- Feedback Quality: How effective is the strategy in providing constructive and actionable feedback?
- Alignment with Learning Objectives: Does the strategy help meet the intended learning goals?
- Scalability: Can the strategy be applied effectively to different class sizes or learning environments?

Brainstorming Session: Encourage participants to brainstorm student-centric assessment ideas based on their own experiences, challenges, and aspirations.

Provide time for participants to design and prototype assessment strategies using the Student-Centric Assessment Matrix as a guide.

- Address Key Criteria: Ensure that the new strategies meet important criteria for effective and student-centred assessment.
- Align with Objectives: Verify that the strategies support your learning goals and are practical for your educational setting.

Stimulate creative thinking and idea generation in designing student-centric assessment strategies. Foster collaboration and knowledge exchange among participants as they share and refine their assessment prototypes.

Emphasize the iterative nature of design thinking, encouraging participants to iterate and improve their assessment designs based on feedback.

Pilot Testing: Test the assessment strategies in small groups or simulated classrooms. Encourage participants to observe student engagement and strategy effectiveness. Facilitate discussions to evaluate the strengths, weaknesses, and improvements of the prototypes. Highlight the importance of analysing data to refine the strategies.

Use feedback from the pilot to iteratively improve the assessments. Encourage participants to work together to plan the next steps.

Empower participants to implement student-centric assessment practices in their own contexts.

OUTCOMES	By the end of the activity, learners will have gained the ability to: • Increase their awareness of how student-centric assessment enhances learning experiences. • Gain hands-on experience designing assessments that promote student involvement and engagement. • Reflect on and explore ways to improve their current assessment methods, focusing on enhancing student outcomes.
TIPS FOR VET TEACHERS, EDUCATORS, TRAINERS, AND EDUCATIONAL TOOL DEVELOPERS	Helpful tips for leading this activity in VET settings: • Start with a few student-centred strategies to gradually adjust and improve based on feedback. • Involve students in the assessment process by seeking their input and incorporating self and peer assessments. • Be open to adapting and refining assessment strategies based on student needs and continuous feedback. • Clearly communicate assessment criteria, expectations, and learning objectives to students. • Design assessments that allow for multiple means of expression, such as audio recordings, infographics, or oral presentations, to support different learning styles and abilities. • Use accessible language and visuals in rubrics and feedback forms to ensure that students from diverse linguistic or cultural backgrounds fully understand how they're being assessed.

Co-funded by
the European Union