

# DESIGN THINKING WORKSHOP GUIDEBOOK



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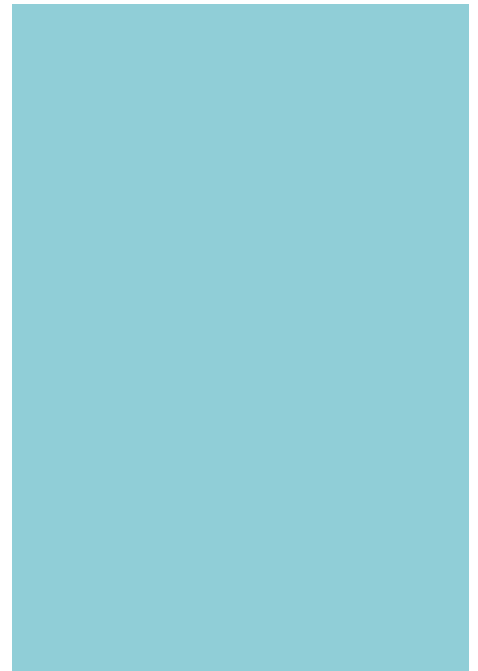
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**DESIGN  
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## TABLE OF CONTENT

INTRODUCTION.....	5
Purpose of Workshop.....	5
Action Plan .....	7
COURSE-1: UNDERSTANDING THE TARGET GROUP .....	7
COURSE-2: CREATIVE THINKING.....	8
COURSE-3: INTERPRETATION AND DEFINITION .....	10
COURSE-4: IDEATE .....	11
COURSE-5: PROTOTYPE .....	12
COURSE-6: TEST.....	13
ANNEXES .....	15
Annex-1: Empathy Map (for Activity-1) .....	15
ANNEXES .....	16
Annex-2: Creative Thinking Activity (for Activity-2) .....	16
ANNEXES .....	17
Annex-3: How might we toolkit (for Activity-3).....	17
ANNEXES .....	18
Annex -4 Scamper questions (for Activity-4) .....	18

## INTRODUCTION

This handbook contains instructions and materials needed to conduct a Design thinking workshop on the subject of attitudes, needs, obstacles and motivations different target groups of learners have in regard to ICT.



Design thinking method is comprised of 6 activities that allow the participating adult learners and also ICT mentors to look at ICT from different perspectives. They can search for and define different important elements of the educational process that need to be changed, excluded or included into the learning process to make it better tailored to the needs of a specific group of learners.

The method relies on empathizing with the target group members to provide them with a way to understand their own needs better and the needs of their peers. It also uses ideation techniques like brainstorming to boost the ability of the participants to translate the insights they obtained into better defined practical solutions to the problems they perceive to have in regard to ICT learning.

Apart from helping the learners and the mentors to better define existing learning obstacles and even discover new unknown ones, the Design thinking method also fosters creativity by allowing the participants to use imagination and mental experimentation to solve problems. The creative angle is supported also by a number of creativity boosting warm-up games at the start of each activity.

The Design thinking method is a part of the crelCTivity learning process. It helps the mentors to prepare better learning content and learning environment and it prepares the learners to start thinking creatively about the subject of ICT.

To learn how to use the handbook as a part of the crelCTivity learning process, see the document Using creativity to support adults in ICT education - Teaching methodology for adult educators, chapter 4 and 5.



### Purpose of Workshop

Every person, knowingly or unknowingly, is included in continuous learning processes. Adults, especially, prefer to learn subjects that have a potential to directly affect their lives. For that reason, adults' learning process is based on their experiences and they prefer to

determine the subject to learn on their own. The design thinking workshop is designed to allow them just that.

The 6 workshop activities take the learners through different stages of thinking about the topic of ICT.

**Activity 1** uses empathy map to help the learners and the teachers uncover the feelings and attitudes the learners have about ICT by asking a series of questions that trigger reflection and empathy towards the learners.

**Activity 2** introduces creativity to the learners and asks them to think creatively about ICT by making connections between seemingly unrelated items.

**Activity 3** allows the teachers to ask questions that are more specific about the obstacles the learners have regarding ICT and learn more about their needs and skills they lack.

**Activity 4** uses a fun form of brainstorming to propose some possible solutions to the problems defined in previous steps.

**Activity 5** asks the learners to propose “prototype” solutions to the problems they identified.

**Activity 6** is the testing of the solutions proposed. In practice, testing is best done by incorporating as many lessons learned during the Design thinking workshop into the preparation of the crelCTivity learning modules.

Taken together, the activities are a form of engaging creative cognitive exercise that improves the learners and the teachers understanding of the needs of the learners. The learners become better prepared for learning new ICT skills and the teachers gain valuable understanding about the topics they need to include in the teaching process. The workshops allow a better definition of known obstacles and can also uncover hidden needs that the learners were perhaps not even aware of previously.

The Design thinking workshop is step 2 of the crelCTivity learning process and its results should be used to prepare relevant and engaging ICT challenges tailored to the needs of various groups of learners.



## Action Plan

- Since activities included in this guidebook cover practices intended for both the mentors and the target group, conduct through two or more sessions is strongly recommended.
- Start every activity with a warm-up activity.
- Provide the participants with information about the activities before starting.
- Collect the results of each activity.
- In case you do activity more than a day, discuss what you have done in the previous activity.

## COURSE-1: UNDERSTANDING THE TARGET GROUP

### Purpose



Gain understanding of the target group's attitude and relation to ICT through empathy.



### Material

Empathy Toolkit



### For Whom

Mentors and Teachers



### Warm-up Game

We ask the participants to look at their mobile phones. Each participant chooses three photographs which they like the most and are then asked to tell the reasons for choosing these photographs



### Share your thoughts and emotions about your target group and ICT

- What is your opinion of ICT?
- What can we do for the harmony between humans and technology?
- In what way do you make contact with your family and friends) (face to face, mobile phone, social media and so on)
- What are the advantages of having strong skills and knowledge about ICT?

### Apply the toolkit we have prepared



### Annex-1 (Empathy Map)

Adult learners and mentors fill in the empathy map together. Adult learners form groups of three. Empathy map in A3 size is printed and hanged on different parts of the classroom. Adult learners write

answers to the questions on the empathy map on post-its and stick them on the empathy map. In addition, adult learners may add new questions.

The mentors will go around the groups and talk to the learners about their answers and the questions they added to try to understand them and their needs.

Empathy map in annex-1 can be adapted so the questions better fit the target group.



### Evaluate the activity

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain the knowledge that you were looking for?

## COURSE-2: CREATIVE THINKING



### Purpose

To Improve the Creative Thinking Ability of both the mentors and the target group



### Material



### For Whom

Mentors and Adult Learners



### Warm-up Game

Getting to know and understand our adult learners is extremely important. The purpose of this warm-up game is to both getting people to know each other and share their experiences. Each participant should share three experiences that they had, and they would advise others to have. For instance, “You should certainly see Bled Lake” or “You should cross the Bosphorus by a ferry” etc.



### Briefing about creative thinking

- What is creativity? Why is it important?
- How do we need it in our daily lives?



- Can we improve creativity?

### Creative thinking exercises

#### Annex-2



An animal, a plant, and an object (preferably, those related to ICT) are chosen. First, all characteristics of the animal and the plant chosen are written down. Then we choose the object (related to ICT) and redesign it by considering the characteristics of this animal and plant. The result does not have to make complete sense. It is about finding new connections between characteristics.

Example		
Animal	Plant	Object
Tortoise	Carrot	Phone
It moves slowly	It's orange	The phone we will design should be somehow related to the characteristics of the animal and the plant. For example, the phone should recognize and know its owner and it should be healthful. It may also be orange. It should send messages about the health of the owner. An application about easy cooking should also be installed.
It has a shell.	It prevents cancer.	
It lives long.	It grows under soil.	
It is possible to distinguish between the male and female tortoises.	It revives and beautifies the skin.	
They know their owner.	It is healthful.	
They need a wide space.	It is used in meals.	



### Evaluate the activity

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain the knowledge that you were looking for?

## COURSE-3: INTERPRETATION AND DEFINITION



### Purpose

To define more clearly adult students' needs and problems regarding ICT.



### Material

Post-it and A3 size paper (how might we toolkit)



### For Whom

Mentors and Adult Learners



### Warm-up Game

It is useful to bring the participants together to ensure that they can hear the instructions and establish physical contact. We give them a scarf to cover their eyes. At this moment, they should stand at the same level. The leader gives the necessary information via announcing and whispering to each of the participants. We write a part of the information on a small piece of paper and give it to the participants before they cover their eyes. The instruction may be to form a line from tall to the short, or the leader may whisper them to form a line from tall to the short. Another duty may be telling them to form a line according to their shoe numbers.



### Briefing about adults' problems with ICT

The mentor will present the problems the target group has with ICT according to their teaching experience. The mentor listens carefully to the answers and writes down the most important points. This information should be used in the preparation of the ICT challenges and in planning ICT learning activities.



### Exercises

#### *Annex-3*

During this process, storytelling method is used. Each participant will tell her/his major problems with improving her/his ICT ability. Meanwhile, mentors and trainers will listen to their stories with utmost care, and they will prepare a report. They will write the keywords about the problems on post-it and will hang them on the wall. Each participant will read these words and mark these post-its if (s)he has the same problem. This will be an activity to find out common problems.

Finally, trainers and mentors will tell the success stories of those people who have learnt about ICT in adulthood.

- Develop “how might we” questions

**For example:**

How might we adapt to ICT technologies?

How might we decide to what we learn concerning ICT? How might we create time and space for ICT?

How might we improve the relationship between ICT and our experiences?



**Evaluate the activity**

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain the knowledge that you were looking for?

**COURSE-4: IDEATE**

**Purpose**



Ideate about the problems defined. Discuss the ideas proposed and evaluate them without prejudice. There may not be a concrete solution to every problem, more than one idea may be proposed.



**Material**

SCAMPER QUESTIONS



**For Whom**

Adult Learners



**Warm-up Game**

Participants say their names and make a gesture that reflects their current mood (e.g. clapping, hugging and laughing)..



**Talk about the importance of ideation in solving problems**

Ideation explores and identifies potential solutions. Ideation is a creative process that allows generating new ideas through a variety of ideation techniques such as brainstorming and prototyping. If done correctly, ideation helps adult learners and mentors determine the right problems and find the right solutions for them.



## Exercises

### Annex-4

Before starting the activity, encourage all participants to share all kinds of opinions. During the activity, SCAMPER technique is used. SCAMPER is a funny kind of “brainstorming” which is done step by step and using techniques determined in advance. It is comprised of seven steps. The name of the method comes from the combination of the capital letters of the names given to each step. The chosen object is changed, developed, divided into parts, and combined with other objects through SCAMPER. The students are asked directing questions students to ensure different and authentic ideas.

**S:** Substitute

**C:** Combine

**A:** Adapt

**P:** Put to other uses

**E:** Eliminate

**R:** Reverse, Rearrange



## Evaluate the activity

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain some new and useful knowledge?

## COURSE-5: PROTOTYPE

### Purpose



Create solutions based on ideas proposed. Prototypes helps you with presenting your ideas to the user. This stage is experimental. It helps you with testing the solutions found in the previous stage.



### Material



Paper, pencil, glue, colored paint, scissors.

### For Whom



Adult Learners



## Warm-up Game

All the participants raise index finger, middle finger and ring finger up. Index finger represents “name”, middle finger represents “favorite

drink” and ring finger represents “their favorite social media”. While walking around the room, the participants touch the fingers of the people they meet with theirs and explain what the fingers represent in turn.



### **Tell the significance of prototypes and what good it would do**

Fourth step of Design Thinking method is an experimental stage. The aim of this step is to find out the best solution for each of the problems identified in the first three steps in the shortest time possible. You prototype a simplified version of your chosen idea in order to be able to test the problem solutions with users that emerged during the idea generation step.



### **Exercises**

Design the solutions you have found with your materials. For example, design a classroom for a better ICT training. Place the necessary materials, subjects, and people in the classroom.

For example, a subject is explained to everyone in the same way in ICT education. While the adults only need to learn sending an e-mail and using google drive, trainings may include complex topics such as excel or software. The solution here is to design the class according to different needs of an ICT class. The prototype of this can be made like this; A classroom design is made from paper or play dough. The inside of the classroom is organized according to different educational topics. For example, the computer of the person who needs to learn Photoshop is different, or the computer of the person who will learn the office program is different. A class with different ICT tools is designed and prototyped.



### **Evaluate the activity**

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain some new and useful knowledge?

## **COURSE-6: TEST**



### **Purpose**

You could test the prototypes you have created through sharing them

with users. Sometimes, it may require going back to the previous step based on the evaluation of user feedbacks. Tests made by users will show you whether you determine the problem and its solution in a correct way or not.



## Material



## For Whom

Mentors and Adult Learners



### Warm-up Game

Each participant tells why he came here? A group forms from those who came for the same purpose. The groups formed talk about the emerging goals.



### Tell the importance of testing and what good it would do

It is difficult to test every solution in real life. For example, it is expensive to design a classroom. Therefore, it is important to test the prototype in an imaginary way. If possible, the prototype is made quite realistically. However, considering that, it is very difficult to find enough time and materials to make realistic prototypes in this workshop, we should test the simplest prototype



### Exercises

Tell other participants your prototypes and encourage them to test and comment on your design.

For example, a classroom design with different ICT tools was made in the prototype section. In this section, participants examine and test this classroom design (they imagine). They behave as if they were using the classroom and test whether the class can produce a solution to its own problem.



### Evaluate the activity

The mentor evaluates the activity by asking the following questions to the participants. After this verbal evaluation, the mentor writes a short report about the activity.

- What did you feel?
- Did you like the activity?
- What did you realize?
- Were you able to attain some new and useful knowledge?



## Annex-1: Empathy Map (for Activity-1)

### WHAT ARE HER/HIS THOUGHTS AND EMOTIONS?



- When did she/he become unsuccessful when she/he was using ICT media?
- What makes her/him afraid when using ICT media?
- What does she/he imagine learning about ICT?
- What can motivate her/him about developing herself/himself in this field?

### WITH WHOM WE TRY TO EMPATHIZE?



- With whom we try to empathize?
- What is the significance of ICT for her/him? What are his experiences about ICT?

Which emotional and economic factors motivates her/him?

### WHAT ARE HER/HIS REQUIREMENTS THAT ARE MET OR NOT MET?



- Which information about ICT should she/he learn? How does she/he understand that she/he is successful?
- Why has not she/he met her/his requirements until that time?
- What kind of a learning environment is necessary?
- What may her/his requirements that she/he could not identify be?
- Why meeting these requirements is significant for her/him?

### WHAT DOES SHE/HE SEE?



What does she/he see when she/he comes across with ICT media?

### WHAT DOES OR CAN SHE/HE DO?



- What does she/he do in her/his spare time?
- What are her/his habits?
- What are her/his abilities about ICT? (web design, social media management, ofce programs, learning via training videos etc)
- Does she/he try to learn something new via Internet?

### WHAT DOES SHE/HE SAY?



- What else does she/he say about ICT media?



## ANNEXES

### Annex-2: Creative Thinking Activity (for Activity-2)

The image displays three vertical columns, each designed for a creative thinking activity. Each column features a distinct colored header at the top: the first is light teal, the second is a medium teal, and the third is a dark teal. Below each header is a large, empty white rectangular area, intended for participants to write their ideas or notes. The columns are separated by thin vertical lines and are set against a light gray background.



## ANNEXES

### Annex-3: How might we toolkit (for Activity-3)



## ANNEXES

### Annex -4 Scamper questions (for Activity-4)

Which material or materials might be used to design ICT training for adults? **Substitute**

What might we combine with your ICT training and what kind of a functional difference does it create? **Combine**

What change in your ICT training might produce different products? **Adapt**

How might your ICT training work if it takes longer or shorter time? **Modify, Minify, Magnify**

In what other ways might your ICT training be used to solve a problem? **Put to other uses**

Are there any parts or subjects that could be eliminated in your ICT training? **Eliminate**

If you designed ICT training process, what kind of changes would you make? **Reverse, Rearrange**

**Core Ideas**

