

IO2 - Targeted Training Package for Adult Educators



STONE

STrengthen the skills Of NEets

AUTHORS:

ASOCIACIJA TAVO EUROPA

Centrul de Resurse pentru Educatie si Formare Profesionala

Chatzi A. - Roupa E. O.E.

ENOROS CONSULTING LIMITED

Kuressaare Gümnaasium

The Rural Hub CLG



Glossary and abbreviations

Adult educator practitioner (AEP) is a person who teaches adult people or organises their learning but doesn't have formal documents confirming his/her andragogic (adult education) qualification. AEP usually work in non-governmental organisations, small, and medium sized enterprises, libraries, social centres, third age universities, adult education centres, etc.

Blended learning is an education programme (formal or informal) that combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student, with some element of student control over time, place, path, or pace.

Open educational resources (OER) are digital materials that can be re-used for teaching, learning, research and more, made available free through open licenses, which allow uses of the materials that would not be easily permitted under copyright alone. OER include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.

Reversed training methodology means that an adult educator has the role of a facilitator and guides trainees/learners to make an initial analysis of the on-line training materials presented as OERs by themselves. After fulfilling their independent learning tasks, the trainees discuss the results with the facilitator in a face-to-face meetings. It means that trainees use the flipped learning method to improve their skills and competences.

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Introduction

Present Document - In a Nutshell

The STONE Targeted Training Package for Adult Educators is offered as a complete toolkit for educators working with NEETs focusing on innovative models, approaches and tools supporting personalised learning to prevent early-school leaving and address the NEET phenomena in Europe. The training package covers relevant topics such as: social intelligence, cross-cultural competences, and virtual collaboration in order to train educators to be in a position to support NEETs' social and economic integration.

The Training Package for Adult Educators has been designed as an open access resource specifically aimed at: training practitioners, teaching organisations, colleges, and independent professionals in the field of youth employment, education, and training.

STONE Project - In a Nutshell

STONE Project aims at defining and validating innovative models, approaches and tools supporting personalised, active, and engaging adult learners' personal development processes, based on self-awareness, reflective and participate based learning models, preventing ESL and NEET phenomena, contemporaneously addressing:

- **Students/ young adults' engagement and motivation:** by implementing self-awareness/evaluation tools, inclusive guidance and learning solutions supporting reflective, engaging, and active behaviours.
- **Trainer's guidance and learning role empowerment:** by adopting the new framework for competences, which are defined as a combination of knowledge, skills and attitudes appropriate to the context.

STONE Project aims to work and focus on adult educators working with NEETs and vulnerable groups, and support the upgrading of their skills through:

- **Targeted Training Package for Adult Educators – Working with NEET groups (IO2)-** validated within a wide piloting framework, in all partner countries (RO, EE; IR; CY; GR; LT), expanding on a previous Erasmus+ project titled T4TEMP and enlarging the project outcomes to align to the new key competences frameworks in Europe,
- **Capacity Building Training Course on new key competences (IO1)** that can be used by Adult Educators to develop five soft skills across four different skill levels: introductory, intermediate, advanced, and expert,

- **Assessment Tool on self- evaluation and learning personalisation** (IO3) for both target groups,
- **Good Practices Toolbox for upskilling adult educators and NEETs** (IO4).

Scope & Objectives

The training course package is designed as a modular series of training materials to be used in sequence towards a multi-faceted training course for the target group, as well as a flexible set of resources to be used independently, for specific learning objectives.

The Training Package Materials focus on:

- Benefits of innovative Training Materials for adult learners.
- A “step by step” description and detailed analysis of how this Training Package are utilised and delivered to the target group.
- Roles and tasks of those involved, BEFORE, DURING and AFTER the training course is completed.

The methodology used for the curriculum design is guided by the following inclusive principles:

- **Anticipatory:** proactive in considering the entitlements of all trainees in the design and delivery of all training activities.
- **Flexible:** open, versatile, and responsive to an evolving trainee population and to changes in circumstances that may require adaptations to the timetable or delivery format to accommodate trainees’ availability; for instance, blended learning.
- **Accountable:** encouraging trainers and trainees to be responsible for the progress they have made against equality objectives and agreed actions.
- **Collaborative:** builds on partnership between trainees and other stakeholders, including professional bodies, enterprises, and employers, to enrich the curriculum content and relevance.
- **Transparent:** makes clear the reason for the design decisions by increasing general awareness of the benefits for all and reduces the possibility of misunderstandings based on perceived preferential treatment.
- **Equitable:** ensures that processes and procedures used for trainees are the same and decisions are made in a fair, open and transparent way.

While providing background information on the issue of NEET training and youth engagement, this training material pack is a ‘ready to go’ template for NEET teachers and training organisations. In addition, to this toolkit being a diverse mix of methodologies and training content for NEETs, the IO2 provides NEET teachers with an excellent resource for assessing and developing their own teaching skills and style. The kit comprises core learning content, exercises, and case studies, as well as additional resources including ice breakers, energisers, supplementary reading, interactive exercise instructions, etc.

Structure & Format

The package comprises training methods, schedules, core modules, and effective element combinations in a toolkit style, covering themes and trends in the field, specific case studies and examples.

The toolkit for each module covers:

- An overview of the modules, including the aims and learning objectives
- Structure and duration of the module
- Suggesting learning / instructional material
- Suggesting teaching methods and educational activities, together with additional resources

Additionally, to the word material that comprises the elements mentioned above, the 9 modules are also presented in PowerPoint format, making the content easier to grasp, and be presented.

The adult educators are invited to combine the resources and use their own experience and materials to adapt them to their target groups or they can also use the resources as they are the toolkit is combining a series of learning outcomes and exercises.

Modules

The training package includes 9 learning modules, designed to be used in a structured series, as well as independent units covering the following main topics:

- **Module 1: Sense making** (interpreting the underlying meaning of expressions).
- **Module 2: Social intelligence** (connecting with others).
- **Module 3: Novel and adaptive thinking** (finding new solutions and responses to unexpected circumstances).
- **Module 4: Cross-cultural competences** (ability to operate in diverse cultural settings).
- **Module 5: Computational thinking** (translating data in abstract concepts).

- **Module 6: Transdisciplinary approach** (understanding concepts from different disciplines)
- **Module 7: Design mind-set** (representing and developing tasks and work processes).
- **Module 8: Cognitive load management** (discriminating and filtering information).
- **Module 9: Virtual collaboration** (working in virtual teams).

Each module is broken-down into 3 sub-modules, each designed to combine a set of theoretical / technical sections and specific sets of practical activities to enhance and assimilate the technical content. Each module has the theoretical sections outlined in a specially designed power-point template that will be used as supporting material, covering the rationale and importance of the specific topic, expected learning outcome, key take-aways, references and further reading, including resources mandatory to be read before the class.

For the practical activities, the module uses case studies, as well as specific exercises and quizzes to practice and assess the theory assimilation.

Each module includes additional resources (movies, icebreakers, energisers, etc) available to adult trainers to enhance the interactivity of the classes and long-term absorption of the knowledge transmitted.

Content & Curricula

Methodology

The pedagogical strategy of this training course is based on the blended learning approach: combination of traditional and virtual learning using an established e-learning platform (previously the T4TEMP project, <https://www.neettools.eu/>) as Open Educational Resources with the possibility to perform self-study at a convenient time and place.

Each module follows the Tell-Show-Do structure, allowing the participants to have a theoretical overview first on the subject, delivered by the trainer (*tell*), followed by exemplification and online resources (*show*) and then by the practical part where the trainees get to experience the concept (*do*).

The structure is shown in the figure below.

Structure of modules	1. Introduction Scope, objectives, get to know, rules, agenda
	2. Tell – Introducing the theme. This part covers the theory and the general framework together with inviting the participants to take part in the conversation
	3. Show – Deep dive into the theme Demonstration of the theory by examples, numbers, images, or videos
	4. Do – Practice the theme. Practical application and exercise for the theme introduced
	5. Talk about Debrief about the exercise, feedback, conclusions

Course Delivery

Delivery

The adult education institutions which will organise the training courses according to the prepared training plan, should ensure a convenient learning environment, technical equipment, and tools, necessary for providing the teaching and learning process based on the blended learning approach within the following facilities:

- classroom with multimedia projector and a computer with the possibility to use PowerPoint for face-to-face meetings.
- access to the personal computers with the internet connection to e-learning platform.
- computers for adult educators' practitioners for e-learning and self-assessment online.
- other organisational tools for face-to-face meetings (board, handouts, paper, etc.)

The trainers of AEP should be prepared for teaching process, respectively:

- create a psychologically friendly learning environment,
- be acquainted with the background of the audiences and be aware of their needs and expectations,



- have experience on how to work with adult people,
- have the knowledge and skills to organise e-learning sessions,
- good knowledge of the teaching content (Modules 1-9),
- good knowledge of Targeted Training for Adult Educators Working with NEET groups
- have essential personal characteristics: positive self – evaluation, can: motivate learners, analyse, and integrate; communicate, and be tolerant.

Training Plan

The training plan is developed to help the trainer organise the training course in relation to its activities. This plan is based on the content of the Training Package/ Curriculum and gives a step-by-step overview of the activities foreseen. The training plan is annexed below as an example and can be updated by the educators to better fulfil the target group needs.

Template for the Learning Activities

(face-to-face/ blended /online activities with NEETs):

Key Competence Addressed:			
Theme			
Activity Title			
Type of resource		Type of learning	<i>Face to Face / Self-directed Learning</i>
Duration of Activity (in minutes)	<i>How long will it take an individual to complete this activity?</i>	Learning Outcome	<i>What is the learning outcome that will be achieved through this activity?</i>
Aim of activity	<i>Describe here the value of completing this activity for learners - this section should motivate the learner to use this activity as a means to develop their skills in the specific key competence.</i>		
Materials Required for Activity	<i>List here all of the materials and equipment required by the learner to complete this activity.</i>		
Step-by-step instructions	<i>Provide advice for learners on how they should complete this activity as part of their autonomous learning.</i> Step 1 – ... Step 2 – ... Step 3 – ... Step4 - ...		



Resource/ Worksheet/ Handout	<i>Include here if there is a worksheet or activity template that the learner needs to complete as part of this learning resource.</i>
De-briefing Questions	<i>Include here a short list of self-assessment and self-evaluation questions that learners can ask themselves to de-brief from this activity. For example, do I feel that I have learned a new skill from this activity? Is this something I can use regularly in my personal, educational, or work life? Will this have a long-term benefit for me? Etc.</i>

Evaluation

A wrap up session is provided at the end of each module. During it, the educator collects feedback from the participants in order to find out what practical and theoretical knowledge they have acquired during the training. Methods range from group discussion or self-administered questionnaires to interactive tasks, such as feedback or an affirmation angle. Although evaluation tasks are assigned to a specific module, they are easily adapted to other parts.

Module 1 – Sense-making (interpreting the underlying meaning of expressions)

Module Title	Sense-making (interpreting the underlying meaning of expressions)		
<i>Module Description</i>	<i>Module aims</i>		<i>Structure and content of the Module</i>
	To define sense-making and understand the process of sense-making, set up positive and supportive spaces for adult learning.		Structured in 3 sub-modules, covering general framework around sense-making competences, theories around defining the sense-making process, approach on adult learners' sense-making and how to use sense-making techniques, as well as tips on how to create positive and supportive spaces for adult learning and a set of exercises for further knowing the subject.
<i>Module Entry Level</i>	Beginners/ Intro into the topic		
<i>Module Duration</i>	5 hours per module (3 hours contact (face-to-face meetings) and 2 hours for the theoretical and practical e-learning via platform)		
<i>Module Optional Supplementary Information</i>	Adult educators/teachers/youth workers/counsellors should create positive and supportive spaces for adult learning.		
<i>Expected learning outcomes – knowledges, skills, competences</i>	<i>knowledges</i>	<i>skills</i>	<i>competences</i>
	#1 Understand the process of sense-making, #2 Understand adult learners' sense-making, #3 Understand sense-making techniques, #4 Understand, how to create positive and supportive spaces for adult learning,	#5 Use sense-making techniques in adult learning, #6 Adapt teaching techniques and styles to create positive and supportive spaces for adult learning,	#7 Create positive and supportive spaces for learning, #8 Practicing sense-making techniques in adult learning.
<i>Suggested learning / instructional material</i>	Sub-module 1 General Framework: learning to understand the sense-making. This sub-module is the theoretical part of the module. Sense-making is a process that starts with organising chaos, noticing, and bracketing. To understand the environment around us and our perspective in a particular situation, we tend to label and categorise to stabilise the stream of experiences. The creation and interpretation of meaning does not necessarily take place as soon as one finds oneself in a situation. Very often sense-making is a retrospective approach to lessons learned. What was known only in theory takes on a clear form through experience and contributes to the development of a person's social skills. Communication is a particularly important part of the sense-making process, as it		



is through it that the thoughts and actions we take are put together (Weick et al., 2005).

The essential features of sense-making are reviewed - noticing, recalling, labelling, connecting, conceiving a systemic understanding, communicating, and acting. Each of them are briefly presented in connection with the learning process.

Presentation of creating positive and supportive spaces for learning. Main ways to reach the best results: 1) welcoming rituals (activities for inclusion); 2) engaging practices (sense-making, transitions, brain breaks); 3) optimistic closures (reflections and looking forward). Each method is briefly presented, and good examples are given.

After the presentation of the theory, we move on to the Benefits of learning tasks, which will allow all participants to share their opinions and experiences and access conclusions related to sense-making.

#Task 1 – Reflecting the experience

Participants are asked to remember when they last participated in the learning process and to share their impressions of what they then learned both about the learning process itself and about themselves as a learner. Take a few minutes to reflect on your personal experience.

#Task 2 – Discussion in pairs/ mini groups (max 3 persons)

The educator divides the training participants into small groups of 2-3 people and asks three questions: 1) how you felt about the experienced of learning something new/ learning process; 2) what the feeling was like to be in a learning process; 3) what you felt was complicated by being in a learning process. For a few minutes, the participants will have a discussion with each other. It is important to encourage all participants to speak. Ideally, the individuals in the groups have slightly different experiences and backgrounds.

#Task 3 – Discussion in large groups

Brainstorming session, during which the aim is to name: 1) benefits of being in the learning process as an educator; 2) benefits of being in the learning process as a learner. Participants are encouraged to keep in mind both the sense-making presentation at the beginning of the sub-module and the reflections on experiences formulated during discussions with other people.

The sub-module concludes with summary questions and a collection of feedback from participants. Based on the comments heard, the further process can be adapted to the needs and interests of the group so that sense-making and interpreting the underlying meaning of expressions are best understood.

This sub-module is related to learning outcomes # 1, # 2, # 4.

Sub-module 2 Sense-making and interpreting techniques in practice.

This section is dedicated to the introduction and mastery of basic techniques. Participants are provided with a methodology that allows them to consistently analyse situations and make meaningful decisions. The teacher introduces the most popular sense-making techniques suitable for adult education. After an introduction to each technique and methodology, participants have time to try them out for themselves.

Sub-Module starts with an introduction to Edward de Bono's Six Thinking Hats. This technique is an extremely useful way to debate an issue, solve a problem, or



to arrive at an important decision. The technique encourages a group to approach the issue at hand from all possible angles.

During a meeting it is often the case that people use different processes, which can make it difficult for a meaningful discussion to take place. For example, if someone wants to put forward a new idea when someone else is still thinking about the practicalities of the last idea, they will not listen properly to each other.

To resolve this situation, de Bono suggests that everyone thinks about the same issues at the same time, by putting on six different metaphorical hats. Each hat has a different colour and represents a particular type of thought process: 1) information gathering; 2) feelings, intuition and emotions; 3) caution, criticism and assessing risks; 4) benefits and feasibility; 5) creativity, new ideas and possibilities; 6) process control.

Because the technique allows an issue or problem to be examined from each angle in turn, no single view (or person) is allowed to dominate a meeting or group discussion. Ideas, decisions and solutions that are reached using the Six Thinking Hats method should, therefore, be more robust and effective than they might otherwise have been. The technique also encourages participants to approach any future issues or problems they encounter more holistically.

Although most commonly used by a group, the Six Thinking Hats technique can also be used effectively by any individual who wishes to take a rounded approach to issues and problems.

#Exercise 1 What a dilemma! Solving the problem of NEETs education with Bono's Thinking Hats. What challenges does NEETs education and teaching bring?

The six-hat method concentrates thinking, encourages creative thinking, helps to communicate better in a group, and facilitates decision-making. One attempt is made to perform one action at a time. All participants simultaneously either focus on information (white hat), or try to anticipate danger (black hat), or generate new ideas (green hat), or express feelings (red hat). This parallel thinking, where all participants wear a "hat" of the same colour at the same time, brings together the experience and intelligence of all participants, helping to avoid conflicts and misunderstandings.

To answer the question, the "hats" are selected one by one or sequenced. For example, we first look at the current situation and the possible course of deliberation (blue hat), present the facts related to the subject under discussion (white hat), evaluate the ideas related to the solution of the problem (green hat), identify the potential benefits (yellow hat), and shortcomings and obstacles (black hat), we express feelings about different alternatives (red hat), summarise and decide (blue hat).

#Exercise 2 Reflection with Dixit Cards

Summary by using Dixit Cards game. It's a game that doesn't require special conditions, but it in itself evokes a lot of emotion. Exceptionally illustrated cards allow you to create a story. In terms of this sub-module, each participant will take 2 cards to describe the feelings before and after the session. Everyone is free to choose how widely they want to share their experiences - you can describe your feelings in one word or sentence or in a short story.

This sub-module is related to learning outcomes # 2, # 3, # 8.



Sub-module 3 Sense-making – theory and practice online

Sense-making and interpreting the underlying meaning of expressions using online resources to present and understand. Different sources of information are used, essentially revealing the topic.

#Task 1 Watching the videos

All the participants are encouraged to watch these videos: 1) Sense-Making & Making Sense: Powerful Ideas (<https://www.youtube.com/watch?v=2CVG1CZq6c>); 2) What is SENSEMAKING? What does SENSEMAKING mean? (<https://www.youtube.com/watch?v=CVp2WKR2NZc>); 3) Elizabeth Pastor – Introducing Sensemaking (<https://www.youtube.com/watch?v=tACQQcSuG74>).

The goal is to deepen the knowledge gained and see different sense-making application practices. Participants can prepare additional questions, which they will then ask the teacher.

#Task 2 Reading the compendium of sense-making

The Compendium presents the essential elements and answers the main questions about the sense-making process and how it can be used in adult learning activities. Also, the main tips are presented for creating positive and supportive spaces for adult learning. What is more important, is that there is a list of literature, which might be useful for both learners and educators in order to gain more information.

After everyone has watched the video individually and got acquainted with the content of the compendium.

One of the last steps is to do a few hands-on activities online. Worksheets are used to implement these activities.

#Exercise 1 All About Me – Face Template

All the participants are asked to describe the target group of NEET from a learner position. Participants are encouraged to be smart and think outside the box. Presentation of works can take place in several ways - there can be a place on any convenient online platform where everyone can upload their works, or works can be delivered by e-mail to the teacher, or delivered by sharing the screen through a communication app, etc. It is important to ensure that all participants have the opportunity to present their drawing briefly.

#Exercise 2 – The components of learning process

In the context of the sense-making topic, all the participants are asked to fill in the worksheet and describe the possible learning process of NEETs. The main things that need to be considered are learning objectives, learning environment, forms of study, characteristics of learners and group characteristics. Again, each participant is given the opportunity to present their deliberations to everyone. The teacher comments on the features of each proposed learning process as much as possible. All participants are invited to participate in the discussion.

To sum up, we move on to the part of reflection. The reflection consists of four main questions: 1) what was the best thing I learned from the module SENSE-MAKING? 2) What did I like least, what would I have done differently? 3) What new knowledge/skills am I going to use in my daily work? 4) What needs further development?



	<p>Gathering feedback based on these questions can be done in a variety of ways. This can be a group discussion online, an anonymous online survey, or something else. It is important to ensure that participants feel comfortable making comments.</p> <p>This sub-module helps to achieve learning outcomes # 5, # 6, # 7 and # 8.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Debriefing is employed to allow learners to discuss the processes involved in the learning context and to particular patient care situation; encourage reflection on those actions and thought processes and incorporate improvement into future performance.</p> <p>Experience sharing is employed to allow learners to learn from one another, to be more aware of some tools and methods that they can use, and to feel connected to the group.</p> <p>Icebreaker is employed to develop group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Lecture is employed to explain and analyse in more detail aspects of theories and approaches to adult learning.</p> <p>Small group discussion is employed to assist learners with responding to possible challenges in implicating and applying certain learning theories and models into practice.</p> <p>Whole group discussion is employed to assist learners when responding to possible challenges in implicating and applying certain learning theories and models into practice.</p>
<p><i>Additional Resources</i></p>	<p>Elizabeth Pastor - Introducing Sensemaking https://www.youtube.com/watch?v=tACQQcSuG74</p> <p>Sense-Making & Making Sense: Powerful Ideas https://www.youtube.com/watch?v=2CVG1CZq6c</p> <p>What is Sensemaking Explained in 2 min https://www.youtube.com/watch?v=1s9Hm138fNg</p> <p>What is SENSEMAKING? What does SENSEMAKING mean? SENSEMAKING meaning, definition & explanation https://www.youtube.com/watch?v=CVp2WKR2NZc</p>

Module 1 – Sense-making (interpreting the underlying meaning of expressions)

The aim of Module 1 is to develop adult educators’ competence to define sense-making and the process of sense-making and understand adult learners’ sense-making.

Sense-making is an essential process in which people construct and make meaningful sense of their everyday life experiences. It has been addressed in the fields of information science, communication, education, organisational studies, and human-computer interaction (e.g., Dervin, 1992; Paul & Morris, 2009; Weick, Sutcliffe, & Obstfeld, 2005). Sensemaking often involves gathering information, gaining an understanding of the information, and then using the understanding to finish a task. For example, sensemaking can occur when a person is trying to buy an unfamiliar product online or when a family is planning their vacation. It can occur when a research group is attempting to make sense of an emerging area or when an organisation is trying to find strategies to deal with globalisation pressures.

The objectives of Module 1:

1. Gain theoretical knowledge of sense-making and the adult learner's sense-making process.
2. Discuss how adult learners sense-making and which are the most common techniques.
3. Gain basic knowledge of sense-making and how to create positive and supportive spaces for adult learning.

Learning outcomes

By the end of Module 1 the adult educator will be able to:

- ✓ Understand the process of sense-making, adult learners' sense-making, different techniques and how to create positive and supportive spaces for adult learning.
- ✓ Use the sense-making techniques in adult learning and adapt the techniques and styles to create positive and supportive spaces for adult learning.
- ✓ Create positive and supportive spaces for learning and use the practical skills gained during this module.

Within this Module adult educators will gain theoretical and practical knowledge about sense-making in both face-to-face activities and online sessions. This module is a part of the training course for adult educators "Developing Adult Educators' Competences to..." and it is presented in 3 sub-modules, coherent with the main objectives of the Module itself:

1. General Framework: learning to understand the sense-making.
2. Sense-making and interpreting techniques in practice.
3. Sense-making – theory and Practice online.

The first sub-module presents the main principles of the topic, the historical evolution of the topic and different approaches, as well as a space for understanding the process of sense-making and adult learners' sense-making.

The second sub-module focuses on the basic techniques that help to improve sense-making understanding and adapting it to adult learning. The techniques are both theoretically presented and tested in practice.

The third sub-module is online training, and it presents a more focused approach on sense-making and sense-making techniques, the challenges, how to create positive and supportive spaces for adult learning, and a set of exercises for further learning the subject.

Sub-Module 1 General framework: learning to understand the sense-making.

Structure:

Introduction and icebreaker Bingo game (20')

Presentation of the theoretical aspects of sense-making (30')

Reflecting on the experience (10')

Discussion in pairs/mini groups (15')

Discussion in large group (15')

Debriefing session (20')

Sub-Module 2 Sense-making and interpreting techniques in practice.

Structure:

Introduction of Edward de Bono's Six Thinking Hats (10')

What a dilemma! Methodology and feedback (30')

Reflection with Dixit Cards (30')

Sub-Module 3 Sense-making – theory and practice online

Structure:

Watching the videos (25')

Reading the Compendium of sense-making (35')

All about me – Face template (20')

The components of learning process (20')

Reflection (20')

Wrap up session

Participants are asked to answer five questions covering the topic presented during the module and its implementation, bearing in mind its applicability in adult education. Everyone is given the opportunity to speak, especially those who were less active or involved during the training sessions (in which case an attempt is made to find out why).

Module 1 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including group discussions, PowerPoint presentations, a variety of online tools, and assessment methods, such as YouTube, etc. This module implements both face-to-face learning and online learning, helping adult educators to develop their theoretical and practical skills in sense-making.

Module 2 – Social intelligence (connecting with others)

Module Title	Social Intelligence (connecting with others)		
Module Description	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To understand how individuals respond to others, to know how to have smooth and effective interactions and how to cultivate empathy, cooperation, and altruism; to become familiar with social intelligence and social awareness.	Structured in 3 sub-modules, covering the general framework around Social Intelligence through the 2 cornerstones of Social Awareness and Social Facility and their main characteristics. In addition, the third sub-module discusses Social Intelligence in School Environment. Additionally, tips on how to create an inclusive learning environment and a set of exercises and study cases for further knowing the subject.	
Module Entry Level	Beginners/ Intro into the topic		
Module Duration	6 hours per module (4 hours face-to-face meetings and 2 hours e-learning via platform).		
Module Optional Supplementary Information	Educators develop a working knowledge of core components of social intelligence such as: primal empathy; atonement; empathic accuracy; social cognition; synchrony; self-presentation; influence; concern, and how social intelligence impacts people and society.		
Expected learning outcomes – knowledges, skills, competences	<i>knowledges</i>	<i>skills</i>	<i>attitudes</i>
	#1 Understand social rules and roles when interact with a group of people, #2 Understand how other people's emotions work, #3 Understand the feelings, thoughts, and behaviours of others;	#4 Improve listening skills, #5 Improve communication skills, #6 Ability to adapt to different social environments, #7 Ability to present ourselves in a way to connect with others, #8 Improve skills regarding communication and interaction with people.	#9 Prefer empathy when interacting with others, #10 Interact smoothly with different types of people, #11 Choice of dialogue and compromise, not conflict.
Suggested learning / instructional material	Sub-module 1 Social Awareness (Primal empathy, atonement, empathic accuracy, social cognition) The phrase "Social Intelligence" to a great extent was coined and formed by psychologist Dr Daniel Goleman in his book Social Intelligence: The New		



Science of Human Relationships (2007). Social Intelligence (SI) is the ability to successfully build relationships and navigate social environments.

The first sub-module consists of the theoretical background of Social Awareness and the four Core Components (*Primal empathy, atonement, empathic accuracy, social cognition*). Enriched presentation is used to present the topic.

The sub-module aims to create the framework for discussion and equip each participant with the same concepts and points of reference as well as to gain the appropriate theoretical knowledge.

The topics of sub-module 1 consist of social awareness presentation and importance, getting familiar with social awareness (primal empathy, atonement, empathic accuracy, social cognition) and applying social awareness to case studies. These are the main cores of social awareness phenomena.

Social awareness is seen as a combination of some features: social signals (eye contact, facial expression, posture and position, touch), positive view (humanity, assume the best, recognise value, seek connection), basic needs (to love and be loved, to be affirmed, to be recognised, to be entertained), games and integrity (V-P-R, hidden agendas, trust your gut feelings and look for integrity).

The theoretical part is supplemented by a case study which is included in the slides. The case study is based on a situation often encountered in the classroom.

Finally, after the theoretical part, we move on to a social awareness quiz that helps to evaluate the gained knowledge.

After all, there are debriefing questions. The learners group assesses how they have come to understand the essential components of social awareness and considers how this could be applied when working with adults.

This theoretical part aims to cover the learning outcomes #4, #5, #6, #7 and #9.

Sub-module 2 Social Facility (Synchrony, self-presentation, influence, concern)

The second sub-module consists of the theoretical background of Social Facility and the four Core Components (*Synchrony, Self-presentation, Influence, Concern*).

The sub-module aims to create the framework for discussion and equip each participant with the same concepts and points of reference as well as to gain the appropriate theoretical knowledge.

As in the previous sub-module, this also aims to get to know the social facility and its essential components - synchrony, self-presentation, influence, and concern. Using the information sources listed in the module description, examples related to the social facility are presented.

Case studies are used to consolidate theoretical knowledge. Depending on the interests of the group, the teacher selects the most appropriate cases and analyses the selected aspects. The aim is to involve as many members of the group as possible in the discussion and evaluation.

Innovative learning methods are used for interactive and effective learning - optionally using quizzes and video games.

The review shows how each learner understood the Social Facility and its essential components - Synchrony, self-presentation, influence, concern. Further learning plans may be adjusted based on feedback.



	<p>This theoretical part aims to cover the learning outcomes #1, #2, #3 and #11.</p> <p>Sub-Module 3 Social Intelligence in School Environment</p> <p>The third sub-module analyses Social Intelligence in School Environment and clarifies whether the main parties (headmasters, teachers, students) are socially skilled. Enriched presentation (videos) are being used to present the phenomena.</p> <p>Studies underline that it is possible that students who are both socially intelligent and highly achieving are the most well-liked or the most popular students in their school. However, it is also possible that whereas social intelligence has a positive effect on perceived popularity, the effect of academic achievement may be neutral or even negative. In this case, the most popular students may be highly socially intelligent but not necessarily doing well in school (Kanimozhi, 2018).</p> <p>Other studies have found that headmasters seem to be self-confident people with a high level of self-respect – unlike students, who have a low level of self-control and adaptability. Teachers are distinguished mainly by low impulsivity. In addition, teachers seem to be successful in stimulating the socio-emotional development of their students. They are able to understand their own selves, their virtues, and insufficiencies, express their emotions and thoughts, as well as understand the lives and needs of other people, particularly their students. They are also able to create and develop cooperative, constructive, and mutually satisfying relationships. Successful work as a teacher, therefore, also involves well-developed social intelligence. However, it is necessary to note that all teachers have their own individual qualities. That is why we will never be certain that generalised conclusions about what brings success will be applicable in all cases (Birknerova, 2011).</p> <p>The participants were presented with examples of both social intelligence and popularity among students and self-confidence and adaptability. Later, all the participants are involved in role-playing. Each participant is asked to identify a training-related interpersonal situation that she/he is struggling with (i.e., bullying within a class) and write down the details of the situation. Everybody is encouraged to try some different approaches to the difficult social situation.</p> <p>For the evaluation session, the group is divided into pairs. Each pair gets a picture of a stop light. In the green box, what was known about the topic before the training is listed. The yellow box lists what has been learned today. In the red - misunderstood things.</p> <p>Both theoretical and practical part aims to cover the learning outcomes #6, #8, #10 and #11.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Brainstorming promotes the involvement of learners in the learning process; helps the development of intimacy, cooperation, and contributing to the improvement of the learning climate, develops free expression, critical thinking, and cooperation.</p> <p>Case studies reinforce the critical and analytical ability of learners; transform trainee attitudes; promotes communication and collaboration and saves teaching time.</p> <p>Enriched presentation uses a supportive audio-visual material to the theoretical background. It helps to make the presentation involving and meaningful.</p>



	<p>Group work is useful in developing self-awareness, critical thinking, mutual help, and an effective approach to an object; it also helps to develop essential communication between learners, freedom of expression, reduction of feelings of failure.</p> <p>Icebreaker develops group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Questions & answers – discussion is used for development of participatory and communicative climate between learners, understanding the issue and learners needs and promoting cooperation capacity among trainees.</p> <p>Role-playing ideas provide the opportunity to act and experience real situations in a protected learning environment in which testing, mistakes and practice are permitted. Through feedback from trainees and the trainer, it is possible for learners to improve and develop desired behaviours.</p>
<p><i>Additional Resources</i></p>	<p>Social-IQ: A Question Answering Benchmark for Artificial Social Intelligence https://openaccess.thecvf.com/content_CVPR_2019/html/Zadeh_Social-IQ_A_Question_Answering_Benchmark_for_Artificial_Social_Intelligence_CVPR_2019_paper.html</p> <p>Scientific Approach to Promote Response Fluently Viewed from Social Intelligence: Is It Effective? https://eric.ed.gov/?id=EJ1222297</p> <p>Gratitude, self-monitoring, and social intelligence: A prosocial relationship? https://link.springer.com/article/10.1007/s12144-019-00330-w</p> <p>Emotional and Social Intelligence and Behaviour https://www.researchgate.net/publication/303946887_EXPLORING_THE_FIELD_OF_COMPUTATIONAL_THINKING_AS_A_21ST_CENTURY_SKILL</p> <p>Can We Learn to Treat One Another Better? A Test of a Social Intelligence Curriculum https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0128638</p> <p>Don't Lose Sight of the Forest. Why the Big Picture of Social Intelligence is Essential https://e-space.mmu.ac.uk/804/</p> <p>Perceived Social Intelligence as Evaluation of Socially Navigation https://www.researchgate.net/publication/348927565_Perceived_Social_Intelligence_as_Evaluation_of_Socially_Navigation</p> <p>The Relationship Between Social Innovation and Social Intelligence: A Conceptual Framework https://www.researchgate.net/publication/350193714_The_Relationship_Between_Social_Innovation_and_Social_Intelligence_A_Conceptual_Framework?_sg=t1_e6V0NX1G6w8y79h5PNc99ft8A-SOp2-t2ww0MKVN8bCxcGsdhyJ-h2_jYzAI1YsL0zzLiVceay1I</p> <p>Clarity in Social Intelligence of Secondary School Students https://www.researchgate.net/publication/351311531_CLARITY_IN_SOCIAL_INTELLIGENCE_OF_SECONDARY_SCHOOL_STUDENTS</p>



	<p>Emotional, Social Intelligences, and Performance of Teachers https://www.researchgate.net/publication/344677288_Emotional_Social_Intelligences_and_Performance_of_Teachers?_sg=IXEOG_EAkgcRzW9GHbgDifXF2pVlzJkw1tkGDkAsC5JZHUG1pQNqD7NBRA29pcGAMegkAju9hes1iDw</p> <p>Social Intelligence in Education: A Mediator Analysis of Attitude https://www.researchgate.net/publication/346850443_Social_Intelligence_in_Education_A_Mediator_Analysis_of_Attitude</p> <p>Social Intelligence and Technology https://www.researchgate.net/publication/263050989_Social_Intelligence_and_Technology</p> <p>A Study on Social Intelligence of High School Students https://www.researchgate.net/publication/344946589_A_Study_on_Social_Intelligence_of_High_School_Students?_sg=3lAzxR5qGiLstmunhDdfhT2kRnnlLieWg5EeEOokLDnb64XpCC50LfMrCaCYnrCaczfMeIKebkAH7PA</p> <p>Interdisciplinary Understanding of the Objectivity of Social Intelligence https://www.researchgate.net/publication/333319681_Interdisciplinary_understanding_of_the_objectivity_of_social_intelligence</p> <p>The Birth of Social Intelligence https://www.researchgate.net/publication/223306141_The_Birth_of_Social_Intelligence</p> <p>Social Intelligence. The New Science of Human Relationships https://kupdf.net/download/social-intelligence-daniel-goleman_5afe296ce2b6f58b4a3cf754_pdf</p> <p>Making of a Social Intelligence Scale http://www.eijfmr.com/2017/sep_2017/Sep-2017-09.pdf</p> <p>Cultivating Social Intelligence: 3 Ways to Understand Others https://positivepsychology.com/social-intelligence/</p> <p>The Social Shapes Test: A New Measure of Social Intelligence, Mentalizing, And Theory of Mind https://osf.io/8eqnk/download/?version=1&displayName=SST%20Manuscript%2020180806-2018-08-06T15%3A03%3A24.003Z.docx</p> <p>The Tromsø Social Intelligence Scale, a self-report measure of social intelligence https://www.researchgate.net/publication/11799351_The_Tromso_Social_Intelligence_Scale_a_self-report_measure_of_social_intelligence?_sg=0khS6eaCv-nLhOxD69QDe3W4D4WZGTpbeO7iBfM7JXs4224kemBea1nAW5jaF-EKzRNdb1DfK4SnFj4</p> <p>Social Behaviour Understanding using Deep Neural Networks: Development of Social Intelligence Systems</p>
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	<p>https://www.researchgate.net/publication/351744499_Social_Behaviour_Understanding_using_Deep_Neural_Networks_Development_of_Social_Intelligence_Systems</p> <p>Why Social Intelligence and Social Listening is The Job of The Future https://thesilab.com/why-social-intelligence-and-social-listening-is-the-job-of-the-future/</p> <p>Social Data Blooming into Social Intelligence https://www.cmswire.com/cms/customer-experience/social-data-blooming-into-social-intelligence-021898.php</p> <p>What is Social Intelligence and How can it Make Your Business Money? https://social.industries/2018/03/14/what-is-social-intelligence-and-how-can-it-make-your-business-money/</p> <p>Tools to assess social intelligence.</p> <p>Measuring Social Intelligence – The MESI Methodology https://www.researchgate.net/publication/271341301_Measuring_Social_Intelligence-The_MESI_Methodology</p> <p>The Social Intelligence Quiz http://karlalbrecht.com/freestuff/quiz.php?qz=si&src=PTBlog2&idcode=</p> <p>Social Intelligence Test http://socialintelligence.labinthewild.org/mite/</p> <p>Videos</p> <p>Iolanda Leite (24 April 2018) The power of socially intelligent robots.: https://www.youtube.com/watch?v=Z1jK9RENTfl</p> <p>Ipsos Social Intelligence (26 January 2018) Social Intelligence https://www.youtube.com/watch?v=oKgLEXbxcpk</p> <p>Maurice, Louise Anne (1 February 2020). Social Intelligence: Building Self Awareness https://www.youtube.com/watch?v=AUI2WT5G8bQ</p> <p>Social Intelligence, Daniel Goleman, Talks at Google https://www.youtube.com/watch?v=-hoo_dIOP8k</p> <p>Summary of Social Intelligence by Daniel Goleman. This is a Free Audiobook, summarizing the main points of this book https://www.youtube.com/watch?v=l8zoDuXMals</p> <p>TEDx Talks (2014) The neuroscience of social intelligence: Bill von Hippel at TEDxUQ 2014 (16 minutes) https://www.youtube.com/watch?v=CM2wIS8UejE</p> <p>The Audiopedia (2017) What is social intelligence? What does Social Intelligence mean? Social Intelligence meaning https://www.youtube.com/watch?v=qfumfghntlk</p>
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Module 2 Social Intelligence (connecting with others)

The Social Intelligence Lab developed a definition of social intelligence that describes it as “the capacity to know oneself and to know others. Social intelligence develops experience with people and learning from success and failures in social settings. It is more commonly referred to as “tact”, “common sense” or “street smarts”.

Social intelligence refers to a person’s ability to understand and manage interpersonal relationships. It is distinct from a person’s IQ or “book smarts.” It includes an individual’s ability to understand, and act on, the feelings, thoughts, and behaviours of other people. This type of intelligence can take place “in the moment” of face-to-face conversations, but also appears during times of deliberate thinking. The module aims at understanding how individuals respond to others, knowing how to have smooth and effective interactions and how to cultivate empathy, cooperation, and altruism, and getting familiar with social intelligence and social awareness.

The objectives of Module 2:

1. Understand social rules and roles when interacting with a group of people.
2. Understand how other people’s emotions work.
3. Understand the feelings, thoughts, and behaviours of others.
4. Be able to adapt to different social environments.
5. Be able to present ourselves in a way to connect with others.
6. Be able to use empathy and interact smoothly, without arguing.

Learning outcomes

By the end of Module 2 the adult educators will have:

- ✓ The ability to use verbal and non-verbal expressions.
- ✓ The ability to present themselves in a way that connects with others.
- ✓ The ability to understand how other people’s emotions work.
- ✓ The ability to actively listen to others.
- ✓ The ability to adapt to different social environment.

The general part of this Module contains theoretical material on the framework of Social Intelligence through its two cornerstones of Social Awareness and Social Facility (and their main characteristics) and how these pillars lead to a socially intelligent individual/person.

Within this Module adult educators will gain theoretical knowledge about social intelligence, specific tools on how to develop social skills and be able to adapt to different contexts.

This module is presented in 3 sub-modules, coherent with the main objectives of the Module itself:

1. Social Awareness (Primal empathy, Atonement, Empathic accuracy, Social cognition).
2. Social Facility (Synchrony, Self-presentation, Influence, Concern).
3. Social Intelligence in school environment.

The first sub-Module presents the theoretical background of Social Awareness and the four Core Components (Primal empathy, Atonement, Empathic accuracy, Social cognition).

The second sub-module focuses on the theoretical background of Social Facility and the four Core Components (Synchrony, Self-presentation, Influence, Concern).

The third sub-module analyses Social Intelligence in School Environment and clarifies whether the main parties (headmasters, teachers, students) are socially skilled. In all sub-modules, various activities, exercises, and case studies are included, in order to enhance participants' knowledge and skills.

Sub-module 1 Social Awareness (Primal empathy, Atonement, Empathic accuracy, Social cognition)

Structure:

Introduction – Ice breaker games (5')

Social Intelligence – Social Awareness (10')

Four core components of Social Awareness (15')

Case studies (10')

Quizzes-Multiplier questions (15')

Debrief (5')

Sub-module 2 Social Facility (Synchrony, Self-presentation, Influence, Concern)

Structure:

Decomposition (theory- examples) (15')

Social Intelligence – Social Facility (examples) (15')

Case studies (10')

Quizzes- Puzzles- Video games (15')

Debrief (5')

Sub-module 3: Social Intelligence in School Environment

Structure:

Social Intelligence and popularity between students (examples) (15')

Self-confident and adaptability (theory- examples) (15')

Role-Playing (10')

Quizzes – Puzzles – Video games (15')

Evaluation (5')

Wrap up session.

Follow the instructions below in order to conclude the session.

Group Writing Wrap-Up:

- Stop light: give each pair of trainees a picture of a stop light. In the green box, they write something they already knew about today's topic. In yellow, they write something they learned today, and in red, they write something they didn't understand about what was discussed.

Group speaking Wrap-Up:

- Create a story using the lesson content. Each student adds one sentence to the story.
- Question technique. Each person creates one question about the content. They ask their partner. Round two would involve matching two pairs and letting them answer one question each. This could be continued, making the group larger and larger, depending on how much time is left.

Module 2 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, PowerPoint presentations with a series of online tools and assessment methods: YouTube, Downloadable Documents (Training Plans, etc.), Online Quizzes and Games or sharing and supporting this method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 3 – Novel and adaptive thinking (finding new solutions and responses to unexpected circumstances)

Module Title	Novel and adaptive thinking (finding new solutions and responses to unexpected circumstances)		
<i>Module Description</i>	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To define Adaptive Thinking and set up a framework of training and interactions in which obtaining adaptability in thinking and action is the promoter for change, performance and progress in society and workplace.	Structured in 3 sub-modules, covering general framework around Adaptive Thinking competences, the role of Adaptive Thinking in producing change and achieving performance and how we combine different types of thinking according to the results to be achieved as an individual or as a group, as well as tips on how to create an inclusive, flexible learning environment and a set of exercises and resources for further knowing the subject.	
<i>Module Entry Level</i>	Beginners/ Intro into the topic		
<i>Module Duration</i>	6 hours per module (3 hours contact (face-to-face meetings) and 3 hours for the theoretical and practical e-learning via platform)		
<i>Module Optional Supplementary Information</i>	Adults' educators/teachers/youth workers/counsellors should create positive and supportive spaces for adult learning.		
<i>Expected learning outcomes – knowledges, skills, competences</i>	<i>knowledges</i>	<i>skills</i>	<i>competences</i>
	#1 Define different types of thinking, #2 Understand the place and role of Adaptive Thinking in producing needed change, #3 Understand the Adaptive Thinking process, #4 Understand how to expand our perspective,	#5 Adapt the communication style for working with diverse groups of participants, #6 Adapt the teaching style to promote an inclusive, creative, and flexible learning context which allows the use of challenges,	#7 Combining different types of thinking according to the results to be achieved, # 8 Practicing adaptability when working with diverse groups.
<i>Suggested learning / instructional material</i>	Sub-module 1 General Framework: Thinking – definition, function, types. The sub-module aims to create the framework for discussion and equip each participant with the same concepts and points of reference as well as to gain theoretical knowledge of thinking and Adaptive Thinking. Since the sub-Module 1 is also the start of the module, the first proposed activity is an ice breaker in order to allow the participants to get to know each other and present themselves. This will be also the first edition and method in order to		



	<p>create a collaborative learning environment when sharing experiences and empathy, adaptability, flexibility are values that must be constantly developed within this module.</p> <p>The sub-Module comprises of a theoretical approach structured in two parts: general overview on thinking – definition, functions, characteristics, and types.</p> <p>This approach leads participants to understand that people think differently depending on their living environment, training, education, social and personal requirements, and the type of personality they have.</p> <p>The second part introduces the concept of Novel and Adaptive Thinking.</p> <p>The concept has been variously defined and there has been no generally agreed upon approach for measuring either the aptitude for adaptive thinking or adaptive thinking performance. Research suggests that adaptive thinking may involve a composite of various factors that include cue recognition, sensemaking, planning and forecasting, metacognition. We will pay attention to this approach in the next sub-module.</p> <p>This theoretical part aims to cover learning outcomes #1, #3 and #8.</p> <p>In terms of exercises, the sub-module proposes one exercise.</p> <p>#Exercise 1 Let’s use different types of thinking!</p> <p>The facilitator describes a context in which there is a situation that needs to be resolved. The participants are organised into three working groups. Each group receives instructions, performs the task, and lists the results in a place visible to all participants. They present the results and the type of thinking used. The exercise allows adult educators to highlight the differences between different types of thinking and the benefits that adaptive thinking can bring.</p> <p>This exercise is designed in order to facilitate learners to achieve learning outcomes #2, #3, #4.</p> <p>Sub-module 2 Deep dive: Adaptive thinking – a promoter of change, performance, and progress</p> <p>The sub-module, as suggested by the title, aims to explore more the concepts introduced in the first part, linking them to real need for Adaptive Thinking and achieve methods for developing Adaptive Thinking skills.</p> <p>This sub-module starts with an analysis of current and future circumstances that characterise personal and professional life.</p> <p>Then, these circumstances are related to the need to develop Adaptive Thinking.</p> <p>In the next step, adult educators will provide participants with some methods for developing adaptive thinking skills. They will consider that all forms of development for Novel and Adaptive Thinking skills follow an experience-based model rather than just individual knowledge acquisition.</p> <p>One of the most important tools is “asking questions”. The practice has shown that innovation isn’t simply about asking the right questions; it also involves framing questions differently. It’s vital that we are able to shift perspectives when we need to generate different types of results. Our goal is to seek better questions, questions with impact, questions that help us identify obstacles. Adult educators will demonstrate to participants what impact questions mean.</p>
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	<p>Another important tool is to discover the real problems. Not all problems are equal. Some are presented to us, others are discovered or created.</p> <p>The act of creating something new presents a series of questions that need to be examined by participants. Therefore, the facilitators will emphasize the following principles: 1) different problems require different actions; 2) the way they are framed potentially limits or broadens our response; 3) problem discovery is an attitude driven by curiosity and empathy.</p> <p>In the last part of this sub-module, adult educators will introduce concepts such as “Problem’s designers” and present ways in which participants can expand their perspectives (“Thinking lenses” concept).</p> <p>This part aims to facilitate the achievement of learning outcome #2, #4, #5, #7.</p> <p>In terms of group interaction, except for the opportunities of sharing experiences among participants, the sub-module proposes one exercise in order to have a better understanding of how to ask questions in order to redefine problems and identify solutions.</p> <p>#Exercise 1 Let’s ask questions!</p> <p>The exercise is designed to ensure the contribution of the whole group, to energise and determine creativity. Finally, the group should have answers to the following questions: Do the questions change certain points of view? Do questions help us redefine problems? Do more questions mean more possible solution?</p> <p>This exercise is proposed in order to facilitate learners to achieve learning outcomes #5 and #7.</p> <p>Sub-module 3 Hands on: How we increase adaptive thinking skills</p> <p>This module begins by highlighting one of the most important qualities of those who use adaptive thinking - adaptability. Other features will be added to the list, such as: Impulse control, Curiosity, Unwillingness to unlearn, A willingness to let go of previously held assumptions, etc.</p> <p>The module links the framework and concepts gained before with real life experience, having the aim to create adaptive thinking skills for the whole group, involving all participants. Also, the module has the aim to equip the participants in order to be able to create collaborative and flexible learning set-ups.</p> <p>This part aims to facilitate the achievement of learning outcomes #2, #4, #5, #7.</p> <p>In terms of group interaction, except for the opportunities of sharing experiences among participants, the sub-module proposes 2 exercises in order to have a better understanding of all the concepts:</p> <p>#Exercise 1 Let’s try more hats!</p> <p>The exercise is designed to discuss and analyse the solutions proposed by Exercise 1 (sub-module 1), using The Six Thinking Hats Theory and all concepts achieved.</p> <p>#Exercise 2 Let’s organise a visit to a children’s centre!</p> <p>The exercise is designed to enable participants to use different types of thinking, especially adaptive thinking, into a collaborative effort in which they combine all of their ideas.</p>
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	<p>These exercises are proposed in order to facilitate learners to achieve the learning outcomes #5, #6, #7, #8.</p> <p>Besides different opportunities to share their own experience, the module comprises a debrief section where the participants are invited to evaluate their learning experience through the module and suggest improvements.</p> <p>This part, both the theoretical, and the practical, helps learners to achieve or to complete the learning outcomes, with a special focus on learning outcomes #5, #6, #7, #8.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Debriefing is employed to allow learners to discuss the processes involved in the learning context and the particular situation in the topic, to encourage reflection on those actions and thought processes, and to incorporate improvements in future performance.</p> <p>Experience sharing is employed to allow learners to learn from one another, to be more aware of some tools and methods that they can use, and to feel connected to the group.</p> <p>Group brainstorming is employed to motivate learners to respond to issues that relate to the structure and scope of adult learning theories and models, as well as to extract ideas regarding critical views on certain adult learning theories and their implications to practice.</p> <p>Icebreaker is employed to develop group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Lecture is employed to explain and analyse in more detail historical aspects of theories and approaches to adult learning.</p> <p>Small group discussion is employed to assist learners with responding to possible challenges in implicating and applying certain learning theories and models into practice.</p> <p>Whole group discussion is employed to assist learners with responding to possible challenges in implicating and applying certain learning theories and models into practice.</p>
<p><i>Additional Resources</i></p>	<p>Adaptive Thinking – Flexibility that creates results https://www.teodesk.com/blog/adaptive-thinking-flexibility-in-the-workplace/</p> <p>Adaptive thinking – interview https://www.youtube.com/watch?v=pl7RSJkXpNs</p> <p>Adaptive Thinking - Introduction Knowledgecity.com https://www.youtube.com/watch?v=2c6nXL_C_kQ</p> <p>Adaptive Thinking & Leadership Simulation Game Training for Special Forces Officers https://www.sandia.gov/adaptive-training-systems/Raybourn%20et.%20al.%20ITSEC%202370b.pdf</p> <p>Adaptive Thinking Training For Tactical Leaders https://apps.dtic.mil/sti/pdfs/ADA428347.pdf</p>



	<p>Adaptive Thinking with Lynne Cazaly https://www.youtube.com/watch?v=jALZoQP3B0</p> <p>Adaptive Thinking: Laboratory Directed Research and Development Final Report Robert G. Abbott, Michael J. Haas, Austin, R. Silva, Jonathan H. Whetzel and Chris Forsythe https://www.researchgate.net/profile/Chris-Forsythe/publication/281069089_Training_Adaptive_Decision-Making_Laboratory_Directed_Research_and_Development_Final_Report/link/s/55d3a49a08aec1b0429f3ca9/Training-Adaptive-Decision-Making-Laboratory-Directed-Research-and-Development-Final-Report.pdf</p> <p>Making Sense of the Relationship Between Adaptive Thinking and Heuristics in Evolutionary Psychology https://sci-hub.se/10.1007/s13752-020-00369-0</p> <p>PrepTalks: Dr. Macal "Using Complex Adaptive Systems Thinking" https://www.youtube.com/watch?v=cj1arD547As</p> <p>Raybourn, E.M. (2005), "Adaptive thinking and leadership training for cultural awareness and communication competence", Interactive Technology and Smart Education, Vol. 2 No. 2, pp. 131-134 https://doi.org/10.1108/17415650580000038</p> <p>The Art of Problem Discovery: Adaptive Thinking for Innovation and Growth, Mathews, Brian, Adaptive Thinking: rationality in the real world, Gerd Gigerenzer, Oxford University Press, Inc., New York, 2000</p> <p>What is Adaptive Thinking https://www.youtube.com/watch?v=fOGdb1CTu5c</p> <p>What is Adaptive Thinking? Knowledgecity.com https://www.youtube.com/watch?v=Jt6Oj185z8</p>
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Module 3 Novel and adaptive thinking (finding new solutions and responses to unexpected circumstances)

The aim of Module 3 is to develop adult educators' competence to define the place and role of adaptive thinking, to determine awareness of its importance in achieving change and performance and to establish a framework for training and interactions in which adaptability and flexibility in thinking and action find their own place.

In a world of increasing global connectivity, market competition, and automation, a premium will exist for skills that facilitate quick and adaptive responses to unfamiliar circumstances. As

everyone and everything becomes more connected, the result is not just that we can do things faster, cheaper, or better. Rather, it is that the whole system becomes highly unpredictable—a change in one node will resonate throughout the whole. As the labour market continues to be defined by volatility, unpredictability, and complexity, workers will be even more frequently called upon to respond to novel and unexpected situations.

Insight, creativity, and adaptability are not easy skills to automate. For this reason, humans will need to cultivate these traits in order to succeed in an increasingly robotic environment.

For these reasons, the need to develop such skills is welcome, and adult educators must be prepared to do so in the most appropriate way.

These types of courses are designed to develop skills such as adaptability, a common denominator in personal and professional life, to solve challenges and to achieve performance.

The objectives of Module 3:

1. Gain theoretical knowledge of Adaptive Thinking.
2. Awareness of the role of Adaptive Thinking in producing change and achieving performance.
3. Understand the Adaptive Thinking process.
4. Get a set of skills for using Adaptive Thinking in groups.
5. Combining different types of thinking according to the results to be achieved.

The general part of this Module contains theoretical concepts about thinking, types of thinking, the place of Novel and Adaptive Thinking in this wide range that is necessary to determine change and performance.

The specific part of the Module presents a developed framework to highlight ways to develop Novel and Adaptive Thinking skills and expand the perspective of trainees.

Learning outcomes

By the end of Module 3 the adult educator will be able:

- ✓ To have the right tools and knowledge to create a suitable context for learning and development of Novel and Adaptive Thinking skills and to design specific training modules towards that.

- ✓ Design specific training modules around the topic and adapt it to different audience: businesses, employees, employers.
- ✓ Understand, adapt, and use different metrics to monitor, evaluate and promote Novel and Adaptive Thinking in trainings and business contexts.

Within this Module adult educators will gain practical knowledge about Adaptive Thinking, using specific hands-on tools and exercises on how to assess and create different adaptive thinking skills in different contexts.

This Module is presented in 3 sub-modules, coherent with the main objectives of the Module itself:

1. General Framework: Thinking – definition, function, types.
2. Deep dive: Adaptive thinking – a promoter of change, performance, and progress
3. Hands on: How we increase adaptive thinking skills

The first sub-module makes the gradual transition from the general concept of thinking to the types of thinking and their characteristics, finally defining the concept that is in the attention of this module: adaptive thinking.

The second sub-module comes to demonstrate the need to acquire an adaptive way of thinking, how we can develop this competence as an individual or group; what techniques we can use to expand our perspective.

The third sub-module offers the participants a moment of reflection on the characteristics of those who use Novel and Adaptive Thinking and puts them in a position to experience this competence in practice, giving them the necessary tools.

Sub-module 1 General Framework: thinking – definition, function, types.

Structure:

Introduction – navigating cultures (5')

Defining thinking (5')

The functions of thinking (5')

Characteristics of thinking (5')

Types of thinking (10')

Adaptive thinking definition (10')

Exercise 1 – Slide 13 - Let's use different types of thinking (15')

Exercise debrief (5')

Sub-module 2 Deep dive: Adaptive thinking – a promoter of change, performance, and progress

Structure:

The need of Adaptive Thinking (5')

Methods for acquiring and developing novel types of thinking (5')

Assessment of groups adaptive thinking (5')

Adaptive Thinking for Innovation and Growth – Asking (15')

Questions and Problem Discovery – how to expand our perspective? (15')

Exercise 2 – Slide 30 – Let's ask questions! (12')

Exercise debrief (3')

Sub-module 3 Hands on: How we increase adaptive thinking skills

Structure:

Characteristics of Adaptive Thinkers (7')

Novel and Adaptive Thinking (3')

Practices to inspire your thinking (20')

Exercise 3 – Slide 40 - Let's try more hats! (10')

Exercise 4 – Slide 42 – Let's organise a visit to children's centre! (15')

Exercise debrief (5')

Wrap up session.

Using "Feedback Tree" (previously displayed on a poster, divided into two equal parts entitled "What do I take with me?" And "What would I like to change?") and sticky notes, participants will express their opinion by a question. In this way, they will be able to reflect on the subject in the future, they will have fun, they will practice once again asking questions in order to define a problem or to find solutions.

Module 3 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions, Power Point presentations, working in large or small groups, reflection, instructional methods, with a series of on-line tools and assessment methods: You Tube, Downloadable Documents, Social Media for sharing and supporting this method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 4 – Cross-cultural competences (ability to operate in diverse cultural settings)

Module Title	Cross-cultural competences (ability to operate in diverse cultural settings)		
Module Description	<i>Module aims</i>		<i>Structure and content of the Module</i>
	To define cultural awareness and expression and set up a framework for training and interactions where openness is the basis for understanding diversity, different backgrounds and multiculturalism.		Structured in 3 sub-modules, covering general framework around cross-cultural competences, theories around defining culture, approach on communication and how to avoid cross-cultural conflict, as well as tips on how to create an inclusive learning environment and a set of exercises and study cases for further knowing the subject.
Module Entry Level	Beginners/ Intro into the topic		
Module Duration	6 hours per module (2 hours face-to-face meetings and 4 hours for the theoretical and practical e-learning via platform) _		
Module Optional Supplementary Information	Adult educators should promote empathy, dialogue, and understanding of the various contexts influencing the learning process.		
Expected learning outcomes – knowledges, skills, competences	knowledges	skills	competences
	#1 Refer to different aspects of intercultural theories, #2 Understand different communication styles across different cultures, #3 Understand social norms and customs in different cultures, #4 Understand common “rules” of non-verbal communication in different relationships;	#5 Adapt the communication style for working with diverse groups of participants, #6 Adapt the teaching style to promote an inclusive learning context,	#7 Interpret non-verbal communication in different cultures, # 8 Practicing empathy tolerance when working with diverse groups.
Suggested learning / instructional material	<p>Sub-module 1 General Framework: diversity, equity, inclusion</p> <p>The sub-module aims to create the framework of discussion and equip each participant with the same concepts and points of reference as well as to gain theoretical knowledge of cultural awareness and expression.</p> <p>Since the sub-module 1 is also the start of the module, the first proposed activity is an ice breaker in order to allow the participants to get to know each other and</p>		



present themselves. This will also be the first stone and method in order to create a collaborative learning environment when sharing experiences and empathy are the values not only to be taught but also to be nurtured within this module.

The sub- module comprises of a theoretical part structured in two dimensions: a general overview on culture, how is culture created, and the second part focusing on two theories on decoding culture, covering cultural bias and cultural intelligence as a concept as well.

This theoretical part aims to cover learning outcomes #1, #3 and #8. The PowerPoint support covers the onion model of decoding culture and introduces Hofstede’s framework of classifying culture, exploring the cultural intelligence concept as defined by Dr David Livermore and how it helps to recognise and adapt to cultural differences.

In terms of exercises, the sub-module proposes two exercises:

#Exercise 1 Exploring cultural values and behaviours

The participants have to give at least one example of cultural values or behaviours typical in their family or social group, to explore if these values or behaviours are shared by other families or social groups that they know, what may be the reason for differences or similarities and if these values or behaviours cause misunderstanding or friction in some social contexts (learning, work)?

This exercise is designed in order to facilitate learners to achieve learning outcomes #2, #3, #4.

#Exercise 2 Unpacking the Invisible Knapsack

The activity is meant to stimulate self-reflection by teachers related to multicultural education and relationship-building. The activity helps teachers see various aspects of life through different cultural lenses, including their own, and improves cultural awareness and community building by checking assumptions we may have.

“White Privilege: Unpacking the Invisible Knapsack” is an essay written by Peggy McIntosh and published in Peace and Freedom magazine in 1989 and the exercise was designed around the essay, being a reference point for teaching diversity and inclusion and understanding privilege.

The exercise is proposed in order to facilitate the achievement of learning outcomes #2 and #8.

Sub-module 2 Deep dive: Opportunities and challenges in promoting diversity in learning contexts.

The sub-module, as suggested by the title, aims to explore more the concepts introduced in the first part and linking them to communication and learning environments, together with mapping different inclusive learning challenges.

This sub-module starts with defining and exploring different formal and informal learning contexts, giving the participants the opportunity to share their own experience and learn from each other.

It also pointed out a series of inclusive learning challenges that can be further developed with the help of the participants.

The second part covers the communication process, introducing the Fundamentals of Effective Communication as defined by Stanfield, as well as



the four-dimension framework for communication developed by German psychologist Friedemann Schulz von Thun.

The final part focuses on intercultural communication and potential causes for cross-cultural conflicts due to communication contexts.

This part aims to facilitate the achievement of learning outcomes #2, #4, #5, #7.

In terms of group interaction, except for the opportunities of sharing experiences among participants, the sub-module proposes 2 exercises in order to have a better understanding of the concepts:

#Exercise 1 Four at a time

The exercise is designed to show the value of non-formal communication and teamwork since all the communication when the game starts needs to be non-verbal.

This exercise is proposed in order to facilitate learners to achieve learning outcomes #5 and #7.

#Exercise 2 Intercultural competence benefits

The exercise is a quick brainstorming activity, where the participants are asked to form groups of 4 people and write a list of benefits related to intercultural competence. After 5 minutes are up, allocate another 5 minutes for groups to present, and share their opinion.

The exercise should be resumed during the last sub-module in order to see if the optics have changed or if other benefits can be identified.

This exercise is proposed in order to facilitate learners to achieve learning outcomes #2, #3, and #8.

Sub-module 3 Hands on: How to create an inclusive learning environment.

This module links the framework and concepts gained before with real life experience, having the aim to equip the participants in order to be able to create inclusive learning set-ups, having them introduced to further theories, exercises and resources that can be used during their trainings, together with showing why cross-cultural competences are important not only in class, but for the future of work, introducing a report developed by the World Economic Forum.

In order to create an inclusive learning environment, the participants are asked first to share their experiences and challenges and then being introduced to 5 inclusivity practices that can be considered and are proposed in a Cambridge article.

As a hands-on tool for teachers that can be used and adapt, the module presents The PISA 2018 Global Competence assessment that measures students' capacity to examine local, global, and intercultural issues, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development.

Another valuable resource is the Future of Jobs 2020 report, developed by World Economic Forum, where the importance of soft skills and communication competences are marked as increasing in importance, giving the trainers the perspective of how the formal and non-formal education can impact the future of work.



	<p>Besides different opportunities to share their own experience, the module comprises a debrief section where the participants are invited to evaluate their learning experience through the module and suggest improvements.</p> <p>This part, both the theoretical, both the peer sharing part, helps learners to achieve or to complete the learning outcomes, with a special focus on learning outcomes #5, #6, #7, #8.</p> <p>The exercise Intercultural competence benefits is the same as the one done within the sub-module 2 in order to allow the participants to revisit their initial ideas, to challenge some of them, to add more.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Debriefing is employed to allow learners to discuss the processes involved in the learning context and to particular patient care situations, encourage reflection on those actions and thought processes, and incorporate improvement into future performance.</p> <p>Experience sharing is employed to allow learners to learn from one another, to be more aware of some tools and methods that they can use, and to feel connected to the group.</p> <p>Group brainstorming is employed to motivate learners to respond to issues that relate to the structure and scope of adult learning theories and models, as well as to extract ideas regarding critical views on certain adult learning theories and their implications to practice.</p> <p>Icebreaker is employed to develop group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Lecture are employed to explain and analyse in more detail historical aspects of theories and approaches to adult learning.</p> <p>Small group discussion is employed to assist learners with responding to possible challenges in implicating and applying certain learning theories and models into practice.</p> <p>Whole group discussion is employed to assist learners with responding to possible challenges in implicating and applying certain learning theories and models into practice.</p>
<p><i>Additional resources</i></p>	<p>Cross-Cultural Competence: Engage People from any Culture https://www.globalcognition.org/cross-cultural-competence/</p> <p>Cross-Cultural Management https://www.youtube.com/watch?v=rJ4IbhXrqnc</p> <p>Cultural Awareness in teacher resources https://www.macmillanenglish.com/us/blog-resources/article/cultural-awareness-1</p> <p>Cultural Competence - An Important Skill Set for the 21st Century https://extensionpublications.unl.edu/assets/html/g1375/build/g1375.htm</p> <p>Cultural diversity https://en.unesco.org/themes/education-sustainable-development/cultural-diversity</p>

	Importance Of Cultural Awareness In The Workplace: How To Become More Culturally Aware https://www.easylama.com/blog/importance-of-cultural-awareness
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Module 4 Cross-cultural competences (ability to operate in diverse cultural settings)

The aim of Module 4 is to develop adult educators' competence to define cultural awareness and expression and set up a framework of training and interactions where openness is the basis for understanding diversity, different backgrounds and multiculturalism.

Cross-cultural competences reflect the ability to understand people from different cultures and backgrounds, allowing them to engage with them effectively. They have gained a significant role since the changes in society and the workplace are becoming more and more dynamic, being important to communicate and have proper skills to work with people across cultures.

It is important to mention that cross-cultural trainings and modules can be found under the name of cultural awareness trainings, intercultural and cultural competency training, but in the end offering the learners the ability to navigate through different communication styles and to understand different cultures than their own.

These types of courses are designed to ensure more inclusive spaces (training, workplace) in a fast-changing society and workforce, being more than a soft skill, but a pre-requisite to succeed.

The objectives of Module 4:

1. Gain theoretical knowledge of cultural awareness and expression.
2. Discuss how cultural awareness and expression is essential for equal and harmonious societies.
3. Gain basic knowledge of multicultural societies; local, national, European, and global.
4. Identify opportunities for personal, social, or commercial value through the arts and other cultural forms.

The general part of this Module contains theoretical material on the framework of cultural awareness and expression, explaining the similarities and differences between “diversity” and “culture”, how can own cultural attitudes impact communication and work habits, as well as to identify behaviours that indicate a lack of cultural competence.

The specific part of the Module presents a developed framework to map the opportunities and challenges of promoting diversity, equity, and inclusion in a set-up (training class, business, and organisational environment).

Learning outcomes

By the end of Module 4, the adult educator will be able to:

- ✓ Have the right tools and knowledge to create a safe and multicultural space for learning and dialogue around diversity and inclusion and design specific training modules towards that.
- ✓ Design specific training modules around the topic and adapt it to different audience: businesses, employees, employers.
- ✓ Understand, adapt, and use different metrics to metrics for monitoring, evaluate, and promote diversity, equity, and inclusion in training and business contexts.

Within this Module adult educators will gain practical knowledge about cultural awareness, using specific hands-on tools and exercises on how to assess and create cultural awareness in different contexts.

This Module is the main Module within the training course for adult educators “Developing Adult Educators’ Competences to???...” it is presented in 3 sub-modules, coherent with the main objectives of the Module itself:

1. General Framework: diversity, equity, inclusion
2. Deep dive: Opportunities and challenges in promoting diversity in organisations.
3. Hands on: Guiding transformative change.

The first sub-Module presents the main principles of the topic, the historical evolution of the topic and different approaches, as well as a space for understanding personal beliefs and biases. The second sub-module presents a more focused approach to organisational culture and the challenges that come with promoting diversity and inclusion.

The third sub-module offers the participants a toolset of metrics, case studies that allow them to assess cultural awareness in different set-ups and to promote cultural awareness.

Sub-module 1 General Framework: diversity, equity, inclusion

Structure:

Introduction – navigating cultures (15’)

Decoding culture (15’)

Cultural Intelligence and Introducing the Onion Model (20’)

Exercise – Understanding privileges (20’)

Exercise debrief (10’)

Sub-module 2 Deep dive: Opportunities and challenges in promoting diversity in learning contexts.

Structure:

Formal and non-formal learning contexts (10’)

Inclusive learning challenges (15’)

Communicating effectively – Introducing the 4Dimensions Framework (15’)

Exercise on communicating effectively (15’)

Sub-module 3 Hands on: How to create an inclusive learning environment.

Structure:

Scanning different theories that can be further used (15’)

Introducing trainers’ toolbox (10’)

Case study & Debrief (15’)

Wrap up session.

Affirmation Mingle: <https://trainings.350.org/resource/the-mingle/>

The set-up is simple: The facilitator creates a limiting boundary, for example, within the circle of chairs that participants have been sitting in. Participants are instructed to get up and move within the boundary.

Have participants mingle randomly in a large group and then instruct them to stop and share with the person in front of them one way in which that person “shined” during the workshop. Repeat several times so that each person gets feedback and support from different people in the group. If there are an odd number of participants, the facilitator should address the odd person out each time.

Module 4 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, Power Point presentations with a series of on-line tools and assessment methods: You Tube, Survey Monkey, Downloadable Documents (Training Plans, etc.), Social Media for sharing and supporting this method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 5 – Computational thinking (translating data in abstract concepts)

Module Title	Computational thinking (translating data in abstract concepts)		
<i>Module Description</i>	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To understand how to compute. Answers to problems, this involves asking a lot of questions, learning to understand the factors that shape a problem, identifying the goals for solving the problem, and then using all of the information to find a solution.	Structured in 3 sub-modules, covering general framework around <i>Computational thinking and its 4 core pillars, the "three As" Computational Thinking Process</i> as a set of three steps: abstraction, automation, and analysis, theories around strategies, improvement, and purposes of computational thinking and how to combine critical and computational thinking. Additionally, tips on how to create an inclusive learning environment and a set of exercises and study cases for further education of the subject.	
<i>Module Entry Level</i>	Beginners/ Intro into the topic		
<i>Module Duration</i>	6 hours in total (2 hours face-to-face meetings and 4 hours for the theoretical and practical e-learning via platform).		
<i>Module Optional Supplementary Information</i>	Educators continually improve their practice by developing an understanding of computational thinking and its application as a cross-curricular skill. Educators develop a working knowledge of core components of computational thinking: such as decomposition; gathering and analysing data; abstraction; algorithm design; and how computing impacts people and society.		
<i>Expected learning outcomes – knowledges, skills, competences</i>	<i>knowledges</i>	<i>skills</i>	<i>attitudes</i>
	#1 Understand computational thinking, #2 Describe the four pillars of computational thinking and their benefits, #3 Describe a systematic process for solving problems and making decisions, #4 Explain the operation of a variety of algorithms,	#5 Solve problems by breaking them down into smaller sections, #6 To recognise if there is a pattern and determining the sequence, #7 To filter out information that is not necessary to solve a certain type of problem, #8 The ability to recognise step by step instructions to solve a problem,	#9 Delegate in group projects and build time management skills, #10 Assimilate computational thinking in real life, #11 Confidence to tackle ambiguous problems, tenacity to persist through challenges.



<p><i>Suggested learning / instructional material</i></p>	<p>Sub-module 1 General Framework: 4 pillars of computational thinking</p> <p>The first sub-module consists of the theoretical background of Computational thinking, and the four Core Components (Decomposition, Pattern recognition, Abstraction, Algorithmic thinking).</p> <p>The sub-module aims to create the framework for discussion and equip each participant with the same concepts and points of reference as well as to gain the appropriate theoretical knowledge.</p> <p>Since the sub-module 1 is also the start of the module, the first proposed activity is an ice breaker in order to allow the participants to get to know each other and present themselves. This will also be the first introduction and method in order to create a collaborative learning environment when sharing experiences and empathy are the values not only to be taught but also to be nurtured within this module.</p> <p>#Icebreaker 1 Rather Than</p> <p>This is an icebreaker to be used as an introductory activity to get participants understanding each other's preferences. Get everyone to sit in a circle. Start by telling everyone else one thing that you like to do (e.g., run 10km). The person to your left then restates what you said and then says something that they would rather do (e.g., run 10km; eat a whole tub of ice cream). The next team member then restates what was said and adds on what they would rather do (e.g., run 10km, eat a whole tub of ice cream, do a skydive). The game continues until every person has said the whole list and added on what they would rather do.</p> <p>#Icebreaker 2 My N.A.M.E</p> <p>Another icebreaker game to get everyone to know each other's names and an interesting fact that may prompt small talk at a later date. Give group members 3 to 5 minutes to think of an interesting fact that corresponds to the letters of their first name. Have each participant share their acronym.</p> <p>The topics of sub-module 1 are: 1) What is computational thinking? Why is it important? 2) Pillars of computational thinking: decomposition, pattern recognition, data representation, and abstraction, algorithms; 3) Applying computational thinking to case studies.</p> <p>When talking about the core pillars of the computational thinking, decomposition is presented as a means of breaking down problems into smaller sections, pattern recognition is considered as recognising if there is a pattern and determining the sequence, abstraction is seen as a generalisation of a problem and focus on the big picture and what's important, finally, algorithms is step by step instruction to solving a problem.</p> <p>This theoretical part aims to cover learning outcomes #1, #2.</p> <p>Bearing this in mind, case studies related to the topic are analysed. After that, quizzes are taken, and this action deepens theoretical knowledge.</p> <p>#Exercise 1 Computational Thinking – test questions and quizzes</p> <p>Using the provided resources, all the participants are asked to join quiz games. In this way, theoretical knowledge will be tested in practice.</p> <p>#Exercise 2 Computational Thinking RPG</p> <p>An RPG educational game which is designed to teach adult players about the fundamentals of Computational Thinking.</p>
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The practical part aims to cover learning outcomes #1, #2 and #11.

Sub-module 2 Decomposition and Pattern Recognition

The second sub-module analyses two of the elements of computational thinking linking them with case studies and examples from real life experiences.

Decomposition is presented as a process of taking a big problem or project and breaking it down into smaller and smaller pieces until they are manageable enough to begin solving. This is frequently introduced to older students by discussing the process of applying for college, but really, it could apply to any problem that needs to be solved.

For example, in the Spring, I like to work in my garden. Some of the initial steps I might identify for my garden project include: 1) deciding what I want to grow; 2) obtaining plants; 3) planting them in the yard; 4) taking care of them, etc.

Other examples that may help to present the topic:

-When we taste an unfamiliar dish and identify several ingredients based on the flavour, we are decomposing that dish into its individual ingredients.

-When we give someone directions to our house, we are decomposing the process of getting from one place to another.

-When we break a course project into several steps, we are decomposing the task into smaller, more manageable subtasks.

-In mathematics, we can decompose a number such as 256.37 as follows: $2*10^2+5*10^1+6*10^0+3*10^{-1}+7*10^{-2}$.

Then the focus is on pattern recognition. Pattern recognition is a very useful skill that humans use constantly to help us understand the world around us and classify types of things in order to make decisions quickly. When we learn to spot similarities and patterns in our lives, we will be in much better shape for reusing all of the information that we learned before to make easier and more consistent options.

Examples that may help to present the topic:

-We look for patterns when choosing a registrar when we checkout.

-Drivers look for patterns in traffic to decide whether/when to switch lanes.

-Investors look for patterns in stock prices to decide when to buy and sell.

-Scientists look for patterns in data to derive theories and models.

In terms of activities, there are two exercises.

#Exercise 1 Decomposition and Pattern Recognition in practice

All participants are asked to watch videos on Computational Thinking: Decomposition and Computational Thinking: Pattern Recognition.

Learners in pairs are going to decompose and break down the tasks and complex problems assigned by the educator (these can be found in the PowerPoint presentation).

#Exercise 2 Decomposing creating an app

Imagine that you want to create your first app. This is a complex problem - there are lots of things to consider. Question: How would you decompose the task of creating an app? Divide the learners into 4 groups. To decompose this task, you would need to know the answer to a series of smaller problems.



	<p>Both the theoretical and practical part aims to cover learning outcomes #3, #5 and #6, #9, #10.</p> <p>Sub-module 3 Abstraction and Algorithms</p> <p>The third sub-module analyses the other two of the elements of computational thinking linking them with case studies and real-life experiences of the learners.</p> <p>When we remove details from an item or a task that aren't necessary for the problem at hand, we're creating an abstraction. For example, a sewing pattern is a kind of abstraction because the pattern itself does not include specific fabric colour, fibre composition, or design.</p> <p>Examples to deepen the topic:</p> <ul style="list-style-type: none"> -A world map is an abstraction of the earth in terms of longitude and latitude, helping us describe the location and geography of a place. -A sign of an aisle in a store (e.g., Walmart) is an abstraction of the items available in that aisle. -When we write a book report, we summarise and discuss only the theme or key aspects of the book, it is an abstraction. -When we tell a story or describe a movie to our friends, why don't we describe every single detail of the story or movie? <p>Algorithms. Some algorithms really are that complex, but in the most basic sense, and algorithm is just a set of steps that are designed to solve a specific problem or achieve a specific result. We follow non-digital algorithms all the time, such as: 1) following recipes; 2) following sewing or knitting patterns; 3) following driving directions from Google Maps or a GPS system; 4) doing the Hokey Pokey or the Electric Slide.</p> <p>Examples regarding the topic:</p> <ul style="list-style-type: none"> -When a cook writes out a recipe for a dish, he or she is creating an algorithm that others can follow to replicate the dish. -When your friend writes down the directions to get to her house, she specifies a sequence of steps – that is, an algorithm – for you to follow. -See Google maps! -When a teacher gives a set of instructions to carry out an experiment, he or she is specifying an algorithm for you to follow to collect and analyse data. <p>#Exercise 1 Videos on Computational Thinking</p> <p>All participants are asked to watch videos on abstraction and pattern generalisation, and algorithm design. Everybody is encouraged to give feedback.</p> <p>#Exercise 2 Brainstorming session</p> <p>Brainstorming is based on abstraction examples in practice. Ideas are discussed in pairs or in a larger group.</p> <p>Both the theoretical and practical part aims to cover learning outcomes #4, #7, and #8, #9, #10, #11.</p>
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<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Brainstorming promotes the involvement of learners in the learning process; It helps the development of intimacy, cooperation, and contributes to the improvement of the learning climate, and develops free expression, critical thinking, and cooperation.</p> <p>Case studies reinforce the critical and analytical ability of learners, develop specialised knowledge, transform attitudes of trainees, promote communication and collaboration, save teaching time.</p> <p>Enriched presentation is employed to support the theoretical background by using audio-visual material, a variety of examples and giving a floor to ask for feedback.</p> <p>Icebreaker develops group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Questions & answers – discussion is aimed at developing or participatory and communicative climate between learners, critical thinking; promotes cooperation capacity among trainees and provides them with detailed approach understanding the issue and learners needs.</p> <p>Role playing provides learners with the opportunity to act and experience real situations in a protected learning environment in which testing, mistakes and practice are permitted. Through feedback from trainees and the trainer, it is possible for learners to improve and develop desired behaviours.</p> <p>Working in groups develops self-awareness, critical thinking, and an effective approach to an object; helps to develop essential communication between learners, freedom of expression, reduction of failure feelings, and is employed to develop reciprocity and mutual help.</p>
<p><i>Additional Resources</i></p>	<p>On computational thinking as a universal skill: A review of the latest research on this ability https://www.researchgate.net/publication/325352993 <u>On computational thinking as a universal skill A review of the latest research on this ability</u></p> <p>Computational Thinking and How to Teach It https://knilt.arcc.albany.edu/Module_Two:_Computational_Thinking_and_How_to_Teach_It#Unplugged_Activities</p> <p>Computational Thinking as an Emerging Competence Domain https://www.researchgate.net/publication/307942866 <u>Computational Thinking as an Emerging Competence Domain</u></p> <p>Exploring the field of computational thinking as a 21st century skill https://www.researchgate.net/publication/303946887 <u>EXPLORING THE FIELD OF COMPUTATIONAL THINKING AS A 21ST CENTURY SKILL</u></p> <p>Computational thinking - OCR test questions – OCR https://www.bbc.co.uk/bitesize/guides/z4rbcj6/test</p> <p>Computational Thinking Activities (mostly for children) https://www.stem.family/activities/computational-thinking-activities/</p>



<p>"Unplugged" Computational Thinking https://microcredentials.digitalpromise.org/explore/unplugged-computational-thinking</p> <p>Problem solving using computational thinking https://jambokhtier.com/problem-solving-using-computational-thinking</p> <p>Introduction to Computational Thinking https://app.quizalize.com/view/quiz/introduction-to-computational-thinking-aad12639-fce5-4fe5-9f64-106bc61cfd4a</p> <p>Computational thinking Quiz https://quizizz.com/admin/quiz/576e6f4391cb32ef5fc69a36/computational-thinking</p> <p>Computational Thinking RPG https://technicallystacy.com/projects/computational-thinking-rpg/</p> <p>Pattern Recognition https://brilliant.org/practice/pattern-recognition-level-1-challenges/</p> <p>Brilliant activities https://brilliant.org/courses/</p> <p>Computational Thinking Activity Quiz https://scratch.mit.edu/projects/377945688/</p> <p>Hour of code https://hourofcode.com/us/gb/learn</p> <p>Computational thinking quests https://www.remc.org/21Things4Students/21/21-computational-thinking/</p> <p>Computational Thinking for Problem Solving https://www.coursera.org/lecture/computational-thinking-problem-solving/1-1-introduction-4twR7</p> <p>What is Computational Thinking? https://robotresources.com/blog/2018/11/3/what-is-computational-thinking</p> <p>An Overview of Computational Thinking https://www.researchgate.net/publication/332724947_An_Overview_of_Computational_Thinking</p> <p>Computational thinking for youth in practice https://dl.acm.org/doi/10.1145/1929887.1929902</p> <p>A framework for computational thinking across the curriculum https://dl.acm.org/doi/10.1145/1822090.1822126</p> <p>Puzzles and computational thinking https://teachinglondoncomputing.org/puzzles/</p> <p>Computational Thinking Puzzles http://www.cs4fn.org/puzzles/</p> <p>CS Unplugged https://classic.csunplugged.org/activities/</p>
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	<p>Tools to assess computational thinking skills.</p> <p>International Challenge on Informatics and Computational Thinking https://www.bebas.org/</p> <p>Dr. Scratch http://drscratch.org/</p> <p>Videos</p> <p>Google Open Online Education (2015, June 8). What is computational thinking? https://www.youtube.com/watch?v=sxUJkn6TJOI&feature=youtu.be</p> <p>Hello Ruby. (2019, September 2). Episode 02: Computational thinking https://www.youtube.com/watch?v=kdngEhA4I00.</p> <p>Josh Darnit. (2017, January 7). Exact instructions challenge – this is why my kids hate me https://www.youtube.com/watch?v=cDA3_5982h8</p> <p>STAR Net (2019, August 27). Computational thinking in your library – unplugged! https://youtu.be/V7ceADiefHk?t=827</p> <p>UC Computer Science Education. (2008, October 25). Computer science unplugged the show https://youtu.be/VpDDPWVn5-Q.</p> <p>Code.org. (2016, March 29). Unplugged lesson in action – Graph paper programming https://www.youtube.com/watch?v=vBUtejDNvrs.</p> <p>Wing, J. (2015, May 27). Computational thinking. <i>Techthings.ca</i> https://www.youtube.com/watch?v=igTy7SA8818</p>
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Module 5 Computational thinking (Translating data in abstract concepts)

The **International Society for Technology in Education (ISTE)** and the **Computer Science Teachers Association** developed an “operational definition” of computational thinking that describes it as a problem-solving process that includes a number of common characteristics and dispositions. The **ISTE/CSTA** definition says:

“Computational thinking (CT) is a problem-solving process that includes (but is not limited to) the following characteristics:

- ✓ Formulating problems in a way that enables us to use a computer and other tools to help solve them.
- ✓ Logically organising and analysing data.
- ✓ Representing data through abstractions such as models and simulations.
- ✓ Automating solutions through algorithmic thinking (a series of ordered steps).
- ✓ Identifying, analysing, and implementing possible solutions with the goal of achieving the most efficient and effective combination of steps and resources.
- ✓ Generalising and transferring this problem-solving process to a wide variety of problems.”

The objectives of Module 5:

1. Gain theoretical knowledge of computational thinking.
2. Describe the four pillars of computational thinking and their benefits.
3. Describe a systematic process for solving problems and making decisions.
4. Recognise if there is a pattern and determine the sequence.
5. Filter out information that is not necessary to solve a certain type of problem.
6. Build time management skills.
7. Assimilate computational thinking in real life.

Learning outcomes

These skills are supported and enhanced by a number of dispositions or attitudes. By the end of Module 5 the adult educator will have:

- ✓ Confidence in dealing with complexity.
- ✓ Persistence in working with difficult problems.
- ✓ Tolerance for ambiguity

- ✓ The ability to deal with open-ended problems.
- ✓ The ability to communicate and work with others to achieve a common goal or solution”.
- ✓ The required tools to assess and evaluate computational thinking abilities.
- ✓ Design specific training modules around the topic and adapt it to different audience: businesses, employees, employers.

The general part of this Module contains theoretical material on the framework of Computational thinking, defining the four basic elements (Decomposition, Pattern Recognition or Matching, Abstraction, and Algorithms) and how these pillars lead to a map that ensures the problem-solving process and can be replicated or automated in the future.

Within this Module adult educators will gain practical knowledge about computational thinking, using specific tools on how to assess and create learning environments in different contexts.

The first sub-module presents the theoretical background, the logic, and methodologies, and the four main core pillars of computational thinking.

The second sub-module focuses on Decomposition and Pattern Recognition as processes and skills in order to make decisions, quickly, recognise and solve problems.

The third sub-module analyses Abstraction and Algorithms as routes to critical thinking and knowledge development. In sub-modules 2 and 3 various activities, exercises, and case studies link theory with daily experiences.

Sub-module 1 General Framework: 4 pillars of computational thinking

Structure:

Introduction – Ice Breaker Games (5’)

Computational thinking (10’)

Pillars of computational thinking (15’)

Case studies (10’)

Quizzes- Multiplier questions- Video Game (15’)

Debrief (5’)

Sub-module 2 Decomposition and Pattern Recognition

Structure:

Decomposition (theory- examples) (20’)

Pattern recognition (theory- examples) (20')
Case studies (15')
Quizzes- Puzzles- Videos- Brainstorming (20')
Debrief (5')

Sub-module 3 Abstraction, and Algorithms

Structure:

Abstraction (theory- examples) (20')
Algorithms (theory- examples) (20')
Case studies (15')
Quizzes- Questions- Video games (20')
Evaluation (5')

Wrap up session.

Group Writing Wrap-Up:

- Stop light: give each pair of trainees a picture of a stop light. In the green box, they write something they already knew about today's topic. In yellow, they write something they learned today and in red, they write something they didn't understand about what was discussed.

Group speaking Wrap-Up:

- Create a story using the lesson content. Each student adds one sentence to the story.
- Question technique. Each person creates one question about the content. They ask their partner. Round two would involve matching two pairs and letting them answer one question each. This could be continued, making the group larger and larger, depending on how much time is left.

Module 5 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, Power Point presentations with a series of online tools and assessment methods: You Tube, Survey Monkey, Downloadable Documents (Training Plans, etc.), Social Media for sharing and supporting this method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 6 – Transdisciplinary approach (understanding concepts from different disciplines)

Module Title	Transdisciplinary approach (understanding concepts from different disciplines)		
<i>Module Description</i>	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To present a transdisciplinary approach as an approach that links concepts and skills through a real-world context. The transdisciplinary approach is seen as one that promotes depth of understanding as well as adaptability to skills needed to succeed in our changing world.	Structured in 3 sub-modules, covering general information around Transdisciplinary approach, such as theoretical background, focusing on the competencies required for educators to develop transdisciplinary processes, skills required for educators while interacting with students during the process of effective problem solving and students' skills, understanding and attitudes they have to develop according to a transdisciplinary approach.	
<i>Module Entry Level</i>	Beginners/ Intro into the topic		
<i>Module Duration</i>	6 hours in total (4 hours face-to-face meetings and 2 hours via e-platform).		
<i>Module Optional Supplementary Information</i>	Educators should continually improve their knowledge and practice by developing an understanding of a transdisciplinary approach and its application as a cross-curricular skill. Educators develop a working knowledge of core components of a transdisciplinary approach, in order to be able to understand concepts from different approaches and consequently to be able to promote collaboration in a new manner.		
<i>Expected learning outcomes – knowledges, skills, competences</i>	<i>knowledges</i>	<i>skills</i>	<i>attitudes</i>
	#1 Understand problem-focused, #2 Describe awareness-building, #3 Understand cognitive engagement, #4 Describe problem comprehension,	#5 Thinking skills, #6 Social skills, #7 Communication skills, #8 Self-management skills, #9 Research skills,	#10 Interaction with professionals of other disciplines, #11 Exposure to real-life cases, #12 Synthesis of different disciplinary perspective.
<i>Suggested learning / instructional material</i>	Sub-module 1 Competencies aiming at professional approach to the designing of transdisciplinary processes.		



	<p>The first sub-module consists of the theoretical background of Transdisciplinary approach, focusing on the competencies required by educators to develop transdisciplinary processes.</p> <p>The sub-module aims to create the framework for discussion and equip each participant with the same competencies, concepts, and points of reference as well as to gain the appropriate theoretical knowledge.</p> <p>The competencies discussed under sub-module 1 are:</p> <ul style="list-style-type: none"> -Being familiar with the special quality requirements of inter- and transdisciplinary collaborations and being willing to commit to them. -Knowing what kind of special challenges and problems might occur in inter and transdisciplinary collaborations and how to deal with them appropriately. -Being able to design expedient and state-of-the-art processes of consensus – building and integration. -Being able to “translate” and reprocess the results produced for the benefit of a non-specialised audience inside and outside academia. -Being able to effectively support efficient communication and collaboration in within a team and organise it to the satisfaction of all involved. <p>There are three different activities organised during the learning process.</p> <p>#Exercise 1 Web-based quizzes</p> <p>#Exercise 2 Multiplier questions</p> <p>#Exercise 3 Cards</p> <p>Following the information provided in the presentation, all participants are involved in the learning process. The aim is to show how theory works in practice.</p> <p>This theoretical part aims to cover learning outcomes #1, #2, #3 and #4.</p> <p>Sub-module 2 Educators’ skills for effective problem solving.</p> <p>The second sub-module analyses four skills required for educators while interacting with students during the process of effective problem solving, namely: 1) Critical and creative thinking, 2) Communication and collaboration, 3) Information media and technology skills, 4) Project based curriculum development (Smyth, 2017).</p> <p>Critical thinking is defined as “the disciplined mental activity of evaluating arguments or propositions and making judgments that can guide the development of beliefs and taking action”. It is necessary to delineate critical thinking from other forms of thinking such as creative thinking or brainstorming. Creative thinking is designing original organisational patterns of existing thoughts or ideas, and brainstorming notes every detail that comes to one’s mind, whereas critical thinking also demands analysis, synthesis, and evaluation.</p> <p>Communication requires participants to exchange facts and opinions, engage in discourse, and ultimately reach agreement. For effective transdisciplinary communication to take place, it is essential for message senders to continually define and exemplify discipline specific language. Teachers must consider these potential barriers to effective communication when facilitating transdisciplinary</p>
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	<p>learning. Teachers must model effective methods to overcome obstacles that impede collaborative communication.</p> <p>Twenty-first century educators must develop a technological skill set that keeps pace with the rapid development of the tech industry and the tech savvy student. Educators have to learn new technologies, create global communities in the classroom through the Internet, and find usefulness in students' personal devices in the classroom, while at the same time having to blog, chat, tweet, and link to the online community. Overall, literature underlines those contemporary educators must use available technology to create a learning atmosphere that promotes classroom, community, country, and global connectivity.</p> <p>Project based curriculum development is an essential characteristic of transdisciplinary learning. Creating learning environments that require students to problem solve through short and long-term projects is the foundation for the collaboration of diverse disciplines. The classroom project is the mechanism that connects all other essential skills necessary for trans disciplinaryity to function.</p> <p>Both the theoretical and practical part aims to cover learning outcomes #5, #6, #7, #8, #9, #10, #11 and #12.</p> <p>Sub-module 3 Students' skills, understanding and attitudes regarding transdisciplinary approach.</p> <p>The third sub-module focuses and analyses the students' skills, understanding and attitudes they have to develop according to a transdisciplinary approach. Information provided in this sub-module will help educators on the main skills they have to teach/develop to their students.</p> <p>For more details, students should:</p> <ul style="list-style-type: none"> -be able to occupy and understand different disciplinary perspectives, -be able to critically evaluate knowledge from a broad range of disciplines, -be able to engage in interdisciplinary inquiry and problem-solving, employing multiple ways of knowing, -have a meta-disciplinary understanding of the nature of knowledge and the disciplines, -be able to integrate, synthesise, balance, and accommodate knowledge from multiple disciplines in order to produce something greater than would be possible from any one disciplinary perspective. <p>Theoretical part of sub-module 3 aims to cover learning outcomes #5, #6, #7 and #11.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Brainstorming promotes the involvement of learners in the learning process, helps the development of intimacy, cooperation, and contributes to improvement of the learning climate, exploits the experience and creativity of learners, and develops free expression and cooperation.</p> <p>Case studies reinforce the critical and analytical ability of learners, provide with specialised knowledge, transform trainees' attitudes, promote communication and collaboration, save teaching time.</p>



	<p>Enriched presentation supports the theoretical background, by using audio-visual material, a variety of examples and gives a platform for asking feedback from trainees.</p> <p>Icebreaker develops group dynamics in order to respond to issues that relate to the implications and effectiveness of adult learning theories.</p> <p>Questions & answers – discussion promotes cooperation capacity among trainees, develops participatory and communicative climate between learners, critical thinking and provides with detailed approach understanding the issue and learner needs.</p> <p>Role-playing provides learners with the opportunity to act and experience real situations in a protected learning environment in which testing, mistakes and practice are permitted. Through feedback from trainees and the trainer, it is possible for learners to improve and develop desired behaviours.</p> <p>Working in groups develops self-awareness, critical thinking, and an effective approach to an object, creates essential communication between learners, reduces failure feelings, and enriches mutual help.</p>
<p><i>Additional Resources</i></p>	<p>Videos\ quizzes\ puzzles\ video games\ bibliography</p> <p>A Transdisciplinary Approach to Equitable Teaching in Early Childhood Education https://journals.sagepub.com/doi/full/10.3102/0091732X18821122</p> <p>Learning Together: A transdisciplinary approach to student-staff partnerships in higher education https://www.tandfonline.com/doi/full/10.1080/07294360.2019.1684454?casa_token=Df-D_dDHmrcAAAAA%3Alm6bTnW3DYDk6cjFgZc6Xj1KUCm_5qTPY58sE5lNqOIyQ-Qpi7LEOvCV6TDzAzQTixL2g2my-tBUFsQzj-8</p> <p>Students as Game Designers: Transdisciplinary Approach to STEAM Education https://www.researchgate.net/profile/Beaumie-Kim/publication/325430371_Students_as_Game_Designers_Transdisciplinary_Approach_to_STEAM_Education/links/5b0dcd1aca2725783f1bfb4/Students-as-Game-Designers-Transdisciplinary-Approach-to-STEAM-Education.pdf</p> <p>Integrating sustainability into higher education curriculums through a transdisciplinary perspective https://www.sciencedirect.com/science/article/pii/S0959652620318060?casa_token=wP1biWqzKIoAAAAA:w12cqkBxjVu_rhcmozOAgeytRLWSXzTChyFmIWA_jn0eiKWdn-T4pt7Wz9QKdMPaCwWtAmhsy8iU</p> <p>Towards inclusive education – Developing transdisciplinary guidance between special needs educators and study councillors in secondary education in Finland’s teacher training https://www.fhnw.ch/de/die-fhnw/hochschulen/hsw/pmo/forschung-und-dienstleistung/laufbahnberatung-40plus/media/iaevg-conference-proceedings-2019.pdf#page=444</p> <p>Being Young, Being NEET – A pedagogical reflexion about Young Adult’s condition in Italy https://books.euser.org/files/proceedings/13th_ICSS_2017_Proceedings_Book_Vol1_ISBN_9788890916113.pdf#page=171</p>



	<p>Low Stock of Social Capital, Obstacles to Reducing Vulnerabilities in Societies https://ebooks.iospress.nl/DOI/10.3233/978-1-61499-953-9-207</p> <p>International Standard of Transdisciplinary Education and Transdisciplinary Competence https://go.gale.com/ps/i.do?id=GALE%7CA651842391&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=15479684&p=AONE&sw=w&userGroupName=anon%7E3b9bb29a</p> <p>What is Developing Integrated or Interdisciplinary or Multidisciplinary or Transdisciplinary Education in School? http://archive.sciendo.com/SIGTEM/sigtem.2017.9.issue-1/sigtem-2017-0010/sigtem-2017-0010.pdf</p> <p>General Education System Quality Analysis / Diagnosis Framework (GEQAF) http://www.ibe.unesco.org/en/general-education-system-quality-analysisdiagnosis-framework-geqaf</p> <p>Trans disciplinarity – the advantage of a holistic approach to life https://core.ac.uk/download/pdf/81103896.pdf</p> <p>Transdisciplinary Integrated Curriculum: An Analysis of Teacher Experiences through a Design Model within the Framework of IB-PYP https://files.eric.ed.gov/fulltext/EJ1277155.pdf</p> <p>Transdisciplinary Approach – What Does It Mean? https://www.totalcommunication.com.sg/post/transdisciplinary-approach-what-does-it-mean</p> <p>Trans disciplinarity: Thinking Inside and Outside the Box https://www.edutopia.org/blog/transdisciplinarity-thinking-inside-outside-box-matt-levinson</p> <p>Conceptions of design by transdisciplinary educators: disciplinary background and pedagogical engagement https://link.springer.com/article/10.1007/s10798-019-09520-w</p> <p>Enabling University Educators to Equip Students with Inter- and Transdisciplinary competencies https://www.emerald.com/insight/content/doi/10.1108/IJSHE-02-2016-0030/full/html?casa_token=y2iQzuxjCEEAAAAA:DH159L-KRego9MPbIkdy7SuEDXRbmAtzLqOfEHA0MZK4Bm6u4145tQ2vFrjaAhDtSXEo1oiMIAfugKJtKXqTCDc9F6_XCbV2d42eEEPS0nO9uXGEC1Rs1A</p> <p>The More the Merrier: Using Collaborative Transdisciplinary Services to Maximize Inclusion and Child Outcomes https://journals.sagepub.com/doi/full/10.1177/1096250620922206?casa_token=n-mx6_0LH9cAAAAA%3ACySq1BfLiMyP2P_iFjGRqFbWyArwhisrysa0ZQM-hiWDDa6j_QoNhBqcJUICYqvWyvW9V84Gm_OmH00</p> <p>Transdisciplinary Pedagogy: A Competency Based Approach for Teachers and Students to Promote Global Sustainability https://www.proquest.com/docview/2101323753?pq-origsite=gscholar&fromopenview=true</p>
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	<p>Teaching for Understanding – Within and Across the Disciplines http://www.ascd.org/publications/educational-leadership/feb94/vol51/num05/Teaching-for-Understanding%E2%80%94Within-and-Across-the-Disciplines.aspx</p> <p>Integrating the Disciplines: Successful interdisciplinary subjects https://gened.psu.edu/sites/default/files/docs/LOA%20-%20InterdisciplinaryCourse_HowToGuide-Gooding.pdf</p> <p>Positive Discipline In The Classroom Certification https://positivediscipline.org/classroom-educator-training</p> <p>Positive Discipline in Everyday Teaching https://resourcecentre.savethechildren.net/sites/default/files/documents/4802.pdf</p> <p>What Is Holistic Education:? Understanding the History, Methods, and Benefits https://soeonline.american.edu/blog/what-is-holistic-education</p> <p>Tools to assess transdisciplinary approach A Tool for Assessing Interdisciplinary Career Guidance. https://research.ou.nl/ws/files/32886606/IAEVG_Conference_Proceedings_2019_FINAL.pdf</p> <p>Videos</p> <p>Stephanie Walsh Matthews (24 August 2016) Pushing The Need for Interdisciplinary Work. Retrieved from https://www.youtube.com/watch?v=QNqoLybBIjs</p> <p>Transdisciplinary Thinking 1 (30 August 2015). Retrieved from https://www.youtube.com/watch?v=NIhSTO4ci0Q</p> <p>Theresa Lim. (24 July 2019). Educating for the Future: The Power of Interdisciplinary Spaces. TEDxYouth@SHC. Retrieved from https://www.youtube.com/watch?v=KGtrsv8G9u0</p> <p>Sarah, Keane & Siv, Worner (11 December 2019) EDU40007: Integrated Studies. Assignment 1: Professional Development Presentation. Retrieved from https://www.youtube.com/watch?v=2IRyiD_NRnk</p> <p>Integrated Learning: One Project, Several Disciplines (22 May 2015) Retrieved from: https://www.youtube.com/watch?v=99FxWH3ovIU</p> <p>CORWIN (28 February 2017). Teaching Conceptual Understanding. Retrieved from: https://www.youtube.com/watch?v=3xvY20jtjr0</p> <p>Julie Stern (13 March 2018) What is Conceptual Understanding? Retrieved from: https://www.youtube.com/watch?v=k4DeP9v9JPY</p>
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Module 6 Transdisciplinary approach (understanding concepts from different disciplines)

UNESCO in collaboration with its Member States, under the International Bureau of Education, has developed the General Education System Quality Analysis/Diagnosis Framework (GEQAF). Its objective is to strengthen national capacity in assessing education systems based on local knowledge and expertise. In the Glossary of Curriculum Terminology, the term “Transdisciplinary approach” is defined and explained. For more details, the definition of Transdisciplinary approach is as follows:

“Transdisciplinary approach is an approach to curriculum integration which dissolves the boundaries between the conventional disciplines and organises teaching and learning around the construction of meaning in the context of real-world problems or themes”.

Transdisciplinary approach includes the following characteristics:

- ✓ Developing an international standard for transdisciplinary education.
- ✓ Describing the content of transdisciplinary competence for students of diverse disciplines at all levels of education.
- ✓ Forming a systems transdisciplinary methodology that is capable of unifying and consolidating disciplinary knowledge on a case-by-case basis.
- ✓ Promoting interaction of people with disciplinary knowledge plus a degree of scientific outlook.
- ✓ Providing a methodology for unifying and generalising disciplinary knowledge.
- ✓ Solving multifactorial problems of modern society.

The objectives of the Module 6:

1. Improve competencies enabling learners to contribute to the process in collaboration.
2. Develop theoretical and methodological knowledge on transdisciplinary approach.
3. Improve practical skills needed for using the transdisciplinary approach.

Learning outcomes

These skills are supported and enhanced by a number of dispositions or attitudes. By the end of Module 6 the adult educator will have:

- ✓ Confidence in interaction with professionals of other disciplines.

- ✓ Persistence in working with difficult problems.
- ✓ Tolerance for ambiguity.
- ✓ The ability to exposure to real-life cases.
- ✓ The ability to communicate and work with others to achieve a common goal or solution.
- ✓ The ability to promote synthesis of a different disciplinary perspective.
- ✓ Describe problem comprehension.

The general part of this Module contains theoretical material on the framework of transdisciplinary approach, focusing on the competencies required educators to develop transdisciplinary processes, which can enable them to promote a problem-solving process through a transdisciplinary lens.

Within this Module adult educators will gain practical knowledge about transdisciplinary approach, having specific tools on how to assess and create learning environment in different contexts.

The first sub-Module presents the theoretical background of Transdisciplinary approach, focusing on the competencies required by educators to develop transdisciplinary processes.

The second sub-module focuses on skills required for educators while interacting with students during the process of effective problem solving.

The third sub-module analyses students' skills, understanding and attitudes they have to develop according to a transdisciplinary approach. In sub-modules 2 and 3 various activities, exercises, and case studies link theory with daily experiences.

Sub-module 1 Competences aiming at professional approach to the designing of transdisciplinary processes.

Structure:

Introduction – Ice Breaker Games (5')

Transdisciplinary approach (10')

Competencies for educators (15')

Case studies (10')

Quizzes- Multiplier questions (15')

Debrief (5')

Sub-module 2 Educators' skills for effective problem solving.

Structure:

Skills for problem solving (theory- examples) (15')

Problem solving methodology (theory- examples) (15')

Case studies (10')

Quizzes- Puzzles- Video games (15')

Debrief (5')

Sub-module 3 Students' skills, understanding and attitudes regarding transdisciplinary approach.

Structure:

Skills to promote transdisciplinary approach (theory- examples) (15')

Attitudes to promote transdisciplinary approach (theory- examples) (15')

Role-Playing (10')

Quizzes- Puzzles- Video games (15')

Evaluation (5')

Wrap up session.

Group Writing Wrap-Up:

- Stop light: give each pair of trainees a picture of a stop light. In the green box, they write something they already knew about today's topic. In yellow, they write something they learned today, and in red, they write something they didn't understand about what was discussed.

Group speaking Wrap-Up:

- Create a story using the lesson content. Each student adds one sentence to the story.
- Question technique. Each person creates one question about the content. They ask their partner. Round two would involve matching two pairs and letting them answer one question each. This could be continued, making the group larger and larger, depending on how much time is left.

Module 6 will use interactive methods of learning, with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, PowerPoint presentations with a series of on-line tools and assessment methods: YouTube,

Downloadable Documents (Training Plans, etc.), Social Media for sharing and supporting this method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 7 – Design Mindset (representing and developing tasks and work processes)

Module Title	Module 7 – Design Mindset (representing and developing tasks and work processes)		
Module Description	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To explore the concept of a design mindset by discovering, embracing, and reflecting on creative innovation and how it contributes to personal development. This will serve as a methodology to follow in order to trust instincts, problem solve and critically analyse the ‘design-centric’ mindset.	Module 7 will be divided into 3 sub-modules, including an introduction to a Design Mindset, explanation of why it is necessary to craft a Design Mindset and giving tips on how to embrace a Design Mindset and implement it in the teaching. These three sub-modules will deliver an in-depth analysis and practical approach to developing an innovative mindset through design thinking.	
Module Entry Level	Beginners/ Intro into the topic		
Module Duration	6 hours per module (4 hours face-to-face practical activities and 2 hours for the theoretical content/e-learning via platform) _		
Module Optional Supplementary Information	Adult educators should promote empathy, focus on human values, craft clarity, embrace experimentation, and encourage collaboration within the learning environments of this module.		
Expected learning outcomes – knowledge, skills, competences	<i>knowledges</i>	<i>skills</i>	<i>competences</i>
	#1 Basic knowledge of a design mindset, #2 Factual knowledge on the advantages of a design mindset, #3 Practical knowledge of how design mindset can foster an entrepreneurial mindset, #4 Theoretical knowledge of how a design mindset empowers innovation,	#5 Discuss the characteristics of a design mindset, #6 Analyse how iteration contributes to a design mindset, #7 Recognise how empathy and human values play a fundamental role in a design mindset,	#8 Acknowledge the positive influence of a design mindset, #9 Willingness to practice empathy when working with others, #10 Willingness to collaborate with multicultural groups, #11 Openness to practice a design mindset when embracing a human-centred approach.
Suggested learning / instructional material	Sub-Module 1: Introduction to a Design Mindset This sub-module introduces the topic of design mindset. This will introduce the topic and encourage a discussion among participants about the concepts of design thinking. A ‘Design Mindset’ or ‘Design Thinking’, is a creative problem-solving approach, widely recognised as a valuable process of thinking for human-centred innovation.		



All the participants are encouraged to answer the question on how they understand the concept of 'Design Mindset' which is later checked and discussed in a group.

Design mindset is supposed to encourage empathy, intuition, creativity, and the generation of innovative ideas. This is followed by the 5-step process involving actions of empathising, defining, ideating, prototyping, and testing. All these steps are carefully explained.

#Exercise 1 Reflection

All students must write down each question posed in each box on the board. All the answers are reviewed and discussed together.

This sub-module will comprise the theory behind a design mindset and the characteristics that pertain to this process of thinking. Sub-Module 1 will introduce participants to this approach to innovation, offering examples, and direction towards an inquisitive yet creative mindset, covering learning outcomes #1, #2, #4, #5, #11.

Sub-Module 2: Why Craft a Design Mindset

This sub-module will focus on the importance and benefits of crafting a design mindset. It will encourage participants to contemplate the advantages of innovative design thinking, such as better skills of problem-solving, trying new things, keen observations, adapting to the process of being more mindful of others, innovation, gaining empathy for both people and systems, connecting with individuals, deepening relationships, and gaining new perspectives.

#Exercise 1 Hands-On Collaboration – Mind Map

All participants are supposed to create a mind-map of what 'Design Mindset' means to them. The following questions can be kept in mind during the process: 1) What is a design mindset? 2) How can it help you? 3) What skills does it promote? 4) How can you implement a design mindset? 5) Why would you use a design mindset? The design thinking process itself is considered valuable and relatable to the topic, giving some practical skills.

Sub-Module 2 will challenge participants to consider their worldview and mental model; and how their own design mindset is influenced by this. It will introduce ideas of why they should embrace a design mindset, furthered in sub-module 3. This sub-module helps to achieve learning outcomes #3, #6, #8.

Sub-Module 3: How to Embrace a Design Mindset and implement it in teaching

This sub-module will empower participants to develop their own design mindset. Embracing a human-centred approach, this module aims to equip participants with the necessary skills and competences to develop mindsets that promote innovation. This sub-module will provide a hands-on approach and motivate participants to apply certain attitudes that empower thinking and creativity. This will aim to encourage adult educators to positively perceive their abilities and promote motivation and achievement.

A 5-stage process of establishing a design mindset is introduced: discovering needs, defining challenges, ideation, experimentation, and evaluation/validation.



	<p>#Exercise 1 What do I need to do for my Design Mindset?</p> <p>This activity will ask participants to establish what they want to achieve through a design mindset. It will also offer advice and guidance on how to embrace a design mindset in different areas of everyday life.</p> <p>Later, the focus is on how a design mindset can actively contribute to upskilling in different key areas. Sub-Module 3 explains how design thinking can help participants improve their overall mindset for the better. This will explore how they can innovate their personal, professional, and social lives to create better experiences.</p> <p>Sub-module highlights how a design mindset can actively contribute to different competences: 1) personal, social, and learning to learn; 2) citizenship; 3) entrepreneurship; 4) cultural awareness and expression; 5) digital.</p> <p>#Exercise 2 Four at a time</p> <p>Four at a Time is great for teaching non-verbal communication and teamwork.</p> <p>#Exercise 3 What now? What’s next? World View Canvas</p> <p>All the participants are asked to think about how a design mindset can impact their life in a positive way. The understanding comes by completing the table, identifying where design thinking can be applied to personal, professional, and social life.</p> <p>The third sub-module will feature hands-on activities and descriptive examples that facilitate the Tell-Show-Do methodology of the Targeted Training Package for Adult Educators, covering learning outcomes #3, #7, #9, #10.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Activities promote self-learning, by offering an exciting non-formal learning approach to encourage positive learning environments.</p> <p>Audio-Visual Learning encourage reflection and engagement.</p> <p>Collaborative Learning is defined as group work activities and discussions that improve collaboration and team working skills.</p> <p>Group Discussion promotes peer-feedback and assists learners by offering multiple perspectives and encouraging active participation and collaboration.</p> <p>Inquiry-Based Learning is employed to pose questions, scenarios or problems that promote an active form of learning.</p> <p>Learner-Centred Approach promotes active learning that encourages participants to share their own knowledge experiences, education, and ideas into the learning environment.</p> <p>Lecture (Visual and Theoretical Learning) aims to teach participants the theory, concepts, and strategic models of the module topics.</p>
<p><i>Additional resources</i></p>	<p>5 Stages of the Design Thinking Process https://www.youtube.com/watch?v=-ySx-S5FcCI</p> <p>Defining the “Design mindset” https://medium.com/@chapolk/design-is-mindset-20f999b75d7e</p> <p>Design Thinking Mindsets for Human-Centred Design https://www.innovationtraining.org/design-thinking-mindsets/</p>

	What Is Design Thinking? An Overview https://www.youtube.com/watch?v=gHGN6hs2gZY
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Module 7 – Design Mindset (representing and developing tasks and work processes)

The aim of Module 7 is to explore the concept of a design mindset. This will aim to discover, embrace, and reflect on creative innovation and how it contributes to personal development. This will serve as a methodology to follow in order to trust instincts, problem solve and critically analyse the ‘design-centric’ mindset.

Design mindsets can be used as a strategy for innovation. This allows individuals to form a mindset focused on clear thinking and problem-solving processes. Design mindsets foster solution-focused and action-oriented perspectives and often involve both analysis and imagination. It favours empathy, intuition, creativity, and the generation of innovative ideas.

Encouraging design mindsets promotes the development of skills to “learn by doing”. This process is learner-centred and encourages individuals to experiment with tools and processes that combine movements of divergence, convergence, and synthesis. These types of courses are designed to ensure more inclusive spaces (training, workplace) in a fast-changing society and workforce, being more than a soft skill, but a pre-requisite to succeed.

The objectives of Module 7:

1. Gain theoretical knowledge of the concept of a ‘design mindset’.
2. Discuss how design mindsets foster innovation.
3. Gain basic knowledge of how to embrace and implement a design mindset in educational, professional, and personal settings.

The general part of this Module contains theoretical material on the framework of a Design Mindset. This explores the theory behind a design mindset, the characteristics that pertain to this process of thinking, the benefits of a design mindset, and moreover, how individuals can foster design mindset thinking in their lives.

The specific part of the Module presents a developed framework to map the opportunities and challenges of promoting innovation, creativity, and human values.

Learning outcomes

By the end of Module 7, the adult educator will be able to:

- ✓ Have the right tools and knowledge to promote empathy, human values, craft clarity, embrace experimentation, and encourage collaboration within the learning space.
- ✓ Design specific training modules around the topic and adapt it to different audience: businesses, employees, employers.
- ✓ Understand, adapt, and use different metrics to monitor, evaluate, and promote diversity, equity, and inclusion in trainings and business contexts.

Within this Module adult educators will gain practical knowledge about design mindsets, using specific hands-on tools and exercises on how to assess and create design mindsets in their own contexts.

Module 7 is divided into 3 sub-modules namely:

1. Introduction to a Design Mindset.
2. Why do you need a craft to Design Mindset.
3. How to embrace a Design Mindset and implement it in teaching.

The first sub-Module presents the main principles of the topic, and the characteristics that pertain to this process of thinking.

The second sub-module presents a more focused approach on the importance and benefits of crafting a design mindset, and how it can affect individual thinking.

The third sub-module offers the participants a hands-on approach as to how they can develop their own design mindset, embracing a human-centred approach. This works to motivate learners to apply certain attitudes that will empower thinking and creativity. This sub-module also offers an insight into how design mindset thinking can help learners to improve their overall mindsets for the better. This will explore how they can innovate their personal, professional, and social lives to create better experiences.

Sub-module 1: Introduction to a Design Mindset (General Framework)

Structure:

Introduction – The theory behind a design mindset (10’)

Activity - Group Discussion (5')

The characteristics of a design mindset (10')

Concepts debrief (5')

Sub-module 2: Why to Craft a Design Mindset (Deep Dive)

Structure:

What are the benefits of a design mindset? (10')

How can this help me? (5')

Activity – Hands-On Collaboration (10')

Activity debrief (5')

Sub-module 3: How to Embrace a Design Mindset (Hands-on Approach)

Structure:

Human-Centred Approach (5')

Necessary Skills and Competences that promote Innovation (5')

5-stage process of a Design Mindset (10')

Activity- What do I need? (10)

My Overall Mindset (10')

Personal, Professional, Social Life (10')

Activity – World View Canvas (10')

Wrap up session.

The facilitator is free to choose the setting up for the evaluation session. Guided questions for the discussion can be:

1. Do you think that a design mindset can help you overall concept of thinking?
2. What purpose will this have in your life?
3. Can you think of an example where you could benefit from using a design mindset?

All participants are encouraged to share their experiences and ideas.

Module 7 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, PowerPoint presentations with a series of online tools and assessment methods: YouTube, Downloadable Documents (Training Plans, etc.), social media for sharing and supporting this



method will support both face-to-face learning and on-line learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 8 – Cognitive load management (discriminating and filtering information)

Module Title	Module 8 – Cognitive load management (discriminating and filtering information)		
Module Description	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To explore the concept of cognitive load management, to dive into the available amount of information that human memory can hold at one time, and how being aware of cognitive load theory and learning to manage your cognitive load can contribute to personal development.	Module 8 will be divided into 3 sub-modules, covering an introduction to Cognitive load theory, presentation of the importance of learning to manage cognitive load, and the management itself. These three sub-modules will deliver an in-depth analysis and practical approach to cognitive load management.	
Module Entry Level	Beginners/Intro into the topic		
Module Duration	6 hours per module (4 hours face-to-face and practical activities and 2 hours for the theoretical content/e-learning via platform)		
Module Optional Supplementary Information	Adults' educators should improve their cognitive load management skills and be able to help their learners to ensure their personal development.		
Expected learning outcomes – knowledge, skills, competences	<i>knowledges</i>	<i>skills</i>	<i>competences</i>
	#1 Basic knowledge of what cognitive load management concept, #2 Knowledge of the science behind human memory and learning, #3 Practical knowledge of how to implement cognitive load theory into daily life, learning and teaching,	#4 Recognising that how information is presented can reduce cognitive load and increase learning, #5 Discuss why knowing cognitive load theory is essential, #6 Analyse how the human brain and memorisation works,	#7 Learning to learn, #8 Openness to change the way one learns and envisions information retaining, #9 Being able to work smarter, not harder.
Suggested learning / instructional material	<p>Sub-module 1 Introduction to Cognitive Load Theory</p> <p>This sub-module introduces the topic of Cognitive Load Theory. To understand the topic better, different types of memory are presented as well, such as sensory memory, working memory, and long-term memory.</p> <p>Cognitive load is seen as a complex phenomenon. Three different types of cognitive load are presented: 1) intrinsic (meaning a level of difficulty of information that someone is wanting to share); 2) extrinsic (as a method in which the information is taught to the students); 3) germane (occurs when a new schema for a concept is being created).</p>		



	<p>This theory will encourage a discussion among participants about the concepts of cognitive load.</p> <p>In terms of activities, one exercise is held during this session.</p> <p>#Exercise 1 Mind map</p> <p>Participants draw a circle with the words “cognitive load management” inside of it. Outside of the circle is filled by words or phrases associated with this topic and learned during the theory learning session.</p> <p>This sub-module will comprise the theory behind cognitive load and the way the human brain and memorisation process works, covering learning outcomes #1, #2, #5.</p> <p>Sub-module 2 Why learning to manage cognitive load is important.</p> <p>This sub-module will introduce the importance and benefits of learning to manage the amount of information one consumes at the time. Cognitive Load Theory can significantly affect learning outcomes. If a learning situation presents material which requires too much processing, one can experience cognitive overload. The latter impairs or prevents learning, so it needs to be avoided by teachers, trainers, and mentors at all costs.</p> <p>To deepen the understanding, one exercise is organised.</p> <p>#Exercise 1 Group discussion</p> <p>Participants discuss, what they know about memory and the memorisation process, why managing the amount of information load is important, and how it can contribute to their learning process.</p> <p>Sub-module 2 will challenge participants to consider their learning model, how the way they learn and the amount of information they retain have a very strong correlation. This helps to reach learning outcomes #6, #8, #9.</p> <p>Sub-module 3 Cognitive load managing: load reducing techniques.</p> <p>This sub-module will empower participants to develop their own way of learning by reducing the cognitive load as much as possible. It will introduce ideas of how one should learn to achieve their goals with less stress and frustration. This module aims to equip participants with the necessary tools, knowledge, and competences to master the process of consuming information.</p> <p>It will introduce several load techniques for presenting information that are simple to understand and easily implemented, such as coherence, signalling, redundancy, special contiguity, and temporal contiguity.</p> <p>#Exercise 1 Making a presentation</p> <p>Participants will be divided into small groups and asked to make a short presentation (2-3 mins), explaining basic everyday objects or actions (e. g. trees, water, cooking, etc.) and using the mentioned techniques of teaching.</p> <p>This sub-module helps to reach learning outcomes #3, #4, #7.</p>
<p><i>Suggested repertoire of teaching methods and techniques and</i></p>	<p>Activities promote self-learning by offering an exciting non-formal learning approach to encourage positive learning environments.</p>

<p><i>suggested educational activities timeframe</i> with</p>	<p>Audio-Visual learning encourages reflection and engagement by using innovative tools.</p> <p>Collaborative learning is employed to improve skills of teamwork skills and self-expression.</p> <p>Group discussion promotes peer-feedback and assists learners by offering multiple perspectives and encouraging active participation and collaboration.</p> <p>Inquiry-Based learning helps in posing questions, scenarios, or problems that promote an active form of learning.</p> <p>Learner-Centred approach promotes active learning that encourages participants to share their own knowledge experiences, education, and ideas into the learning environment.</p> <p>Lecture (Visual and Theoretical Learning) aims to teach participants the theory, concepts, and strategic models of the module topics.</p>
<p><i>Additional resources</i></p>	<p>Cognitive Load Theory https://www.sciencedirect.com/topics/psychology/cognitive-load-theory</p> <p>Cognitive Load Theory (Definition + Examples) https://www.youtube.com/watch?v=IKyUihBWU_s</p> <p>Cognitive Load Theory 3 - intrinsic, extraneous, germane https://www.youtube.com/watch?v=IkHOEGYqWOO</p> <p>Teaching Strategies: Cognitive Load Theory https://www.youtube.com/watch?v=UpA6RdE0aYo</p> <p>What is cognitive load? https://thelearningcoach.com/learning/what-is-cognitive-load/</p>

Module 8 – Cognitive load management (discriminating and filtering information)

The aim of module 8 is to explore the concept of cognitive load management. Module 8 aims to dive into the available amount of information that human memory can hold at one time and how being aware of cognitive load theory and learning to manage your cognitive load can contribute to personal development.

The Cognitive Load Theory was created by John Sweller and tries to describe how the human brain processes new information. CLT examines the complex relationship between our working and long-term memory. It states that if information in cannot be processed in working memory, then it won't be transferred and stored in long-term memory. Then, it won't be remembered in the future. The simpler the ideas are, the easier it is to process them, and store them in long-term memory. Each person's age and development influence the amount of cognitive load that one can take on at once. According to J. Sweller, there are 3 types of

cognitive load (intrinsic, extrinsic and germane). All these types are presented in order to know how cognitive load works. Cognitive Load Theory can significantly affect learning outcomes. If a learning situation presents material which requires too much processing, one can experience cognitive overload. The latter impairs or prevents learning, so it needs to be avoided by teachers, trainers, and mentors at all costs.

The objectives of Module 8:

1. Gain basic knowledge of cognitive load management concept.
2. Discuss why knowing cognitive load theory is essential.
3. Gain practical knowledge of how to implement cognitive load theory into daily life, learning, and teaching.
4. Analyse how the human brain and memorisation works.

The general part of this module contains theoretical material covering cognitive load theory, its importance, management, and adaptation to learning process. In terms of practical skills, this module's focus is on group work, creation of a mind map and presentations that help to learn load reducing techniques.

Learning outcomes

By the end of Module 8 the adult educator will be able to:

- ✓ Gain basic knowledge of cognitive load management concept.
- ✓ Discuss why knowing cognitive load theory is essential.
- ✓ Gain practical knowledge of how to implement cognitive load theory into daily life, learning, and teaching.
- ✓ Analyse how the human brain and memorisation works.

Within this Module adult educators will gain theoretical and practical knowledge about cognitive load and its techniques and possibilities to adapt it in the adult learning process.

This module is present in 3 sub-modules, coherent with the main objectives of the Module itself:

1. Introduction to Cognitive Load Theory.
2. Why learning to manage cognitive load is important.

3. Cognitive load managing: load reducing techniques.

The first sub-module introduces the topic of Cognitive Load Theory, improving the understanding of the topic better and mentioning different types of memory.

The second sub-module introduces the importance and benefits of learning to manage the amount of information one consumes at the time.

The third sub-module empowers participants to develop their own way of learning by reducing the cognitive load as much as possible. It introduces ideas of how one should learn to achieve their goals with less stress and frustration.

Sub-module 1 Introduction to Cognitive Load Theory

Structure:

Three memory types (20')

Cognitive load (20')

Creation of mind map (20')

Sub-module 2 Why learning to manage cognitive load is important.

Structure:

Learning to learn (10')

Management of cognitive load (15')

Group discussion (25')

Sub-module 3 Cognitive load managing: load reducing techniques.

Structure:

Load reducing techniques (30')

Preparation of presentation (30')

Wrap up session.

The wrap up session takes place on a group discussion basis. All participants were asked what they knew about cognitive load before teaching and how their knowledge and skills changed with learning more about different types of memory, cognitive load theory, and its applicability in adult learning, and ultimately how they performed in the practical tasks.

Separate cards with questions (one card - one question) can be made to encourage as many participants as possible to share their impressions. Each participant draws one card with a question and answers it. If there are people who want to add something, they are allowed to do so.

Module 8 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, PowerPoint presentations with a series of on-line tools and assessment methods: YouTube, Downloadable Documents (Training Plans, etc.), Social Media for sharing and supporting this method will support both face-to-face learning and online learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.

Module 9 – Virtual collaboration (working in virtual teams)

Module Title	Computational thinking (translating data in abstract concepts)		
<i>Module Description</i>	<i>Module aims</i>	<i>Structure and content of the Module</i>	
	To understand different type of virtual context: learning, working, and in general collaborating, to gain initial knowledge on how to prepare and be prepared for each context as well as to have some examples of platforms and activities that can facilitate virtual learning and virtual collaboration.	Structured in 3 sub-modules, covering general framework around virtual collaboration, describing virtual meetings and virtual learning, the second sub-module offers tips and practical examples on how to organise such environments, where the last sub-module focuses on exercises and practical examples on how to engage participants in virtual teams.	
<i>Module Entry Level</i>	Beginners/ Intro into the topic		
<i>Module Duration</i>	6 hours in total (4 hours face-to-face meetings and 2 hours via e-platform).		
<i>Module Optional Supplementary Information</i>	Due to the changes on the job market and also due to the pandemic that put pressure on transitioning to remote working and virtual learning environments, virtual collaboration became a trending topic for experts and a constant preoccupation for educators.		
<i>Expected learning outcomes – knowledges, skills, competences</i>	<i>knowledges</i>	<i>skills</i>	<i>attitudes</i>
	#1 Understand virtual collaboration, #2 Refer to different aspects of virtual collaboration and virtual learning environments, #3 Have access to different tools and platforms that can boost interactivity in virtual collaboration,	#4 Adapt the communication and teaching style for working in virtual environments, #5 Adapt the teaching style to promote an interactive learning context,	#6 Openness towards virtual collaboration and online working tools, #7 Confidence to build interactive virtual learnings context.
<i>Suggested learning / instructional material</i>	<p>Sub-module 1 General Framework: 4 pillars of computational thinking</p> <p>The first sub-module consists of a general introduction to virtual collaboration, presenting different virtual contexts.</p> <p>The sub- module aims to create the framework for discussion for mapping various working and learning contexts in virtual environments as well as to equip each participant with the same concepts and points of reference.</p> <p>The topics of sub-module 1 are: defining virtual learning and benefits of it, virtual meetings, and some key stats to discuss this method, tips on creation of a virtual meeting agenda and creation of an engagement in virtual contexts.</p>		



	<p>This theoretical part aims to cover learning outcomes #1, #2 and #7.</p> <p>Sub-module 2: How to create relevant and effective virtual collaboration settings.</p> <p>The second sub-module is introducing how behaviour enablers, artifacts, and nudges (BEANs) can make desired behaviours habitual and how this can be used in creating effective virtual collaboration settings, linking them with case studies and examples from real life experiences.</p> <p>#Exercise 1 Brainstorming</p> <p>All participants are encouraged to share their ideas on how to make virtual learning environments engaging. The educator invites everyone to consider who would be most involved in learning online or creating a product in virtual reality. It is important to note not only the positive but also the negative aspects.</p> <p>#Exercise 2 Group work</p> <p>Participants are divided into groups of 3-4 people. Guidelines are given for the development of the discussion. The main goal is to share personal experiences of virtual collaboration, highlighting the most successful aspects and the most challenging ones. Each group chooses two samples, which are then presented to the entire audience. At the same time, an attempt is made to identify what connects good and bad experiences.</p> <p>The second part of the sub-module focuses on hands-on tips and experience sharing on how to create an impactful virtual learning environment, covering learning outcomes #4, #5 and #7.</p> <p>Sub-module 3: Exercises and platforms for virtual engagement</p> <p>The third sub-module offers the educators different tools and platform ideas in order to create virtual engagement. Platforms such as Airmeeet, Wisembly, etc. are mentioned.</p> <p>Also, using teamwork and exercises allows the participants to design a sample engagement quiz in order to test one platform and understand the mechanics, so being able to tailor the content later on for their lesson plans.</p> <p>#Exercise 1 Engagement quiz</p> <p>Groups of 2-3 people create a quiz of ten questions, based on previously presented platforms and digital tools. The aim is to fundamentally analyse the capabilities of platforms and tools, their strengths, and commonalities.</p> <p>Both the theoretical and practical part aims to cover learning outcomes #3, #5, #6, #7.</p>
<p><i>Suggested repertoire of teaching methods and techniques and suggested educational activities with timeframe</i></p>	<p>Enriched presentation supports the theoretical background, using supportive audio-visual material and personal experience of the participants.</p> <p>Questions & answers – discussion develops a participatory and communicative climate between learners, same as critical thinking, understanding needs and facilitating experience sharing, promoting cooperation capacity among trainees.</p>

	<p>Working in groups is employed to develop self-awareness, critical thinking, by giving an effective approach to an object, developing essential communication between learners and reciprocity.</p> <p>Icebreaker develops group dynamics in order to respond to issues that relate to the implications and effective of adult learning theories.</p>
<i>Additional resources</i>	<p>10 tips for successful virtual collaboration in 2021 https://conceptboard.com/blog/10-tips-for-successful-virtual-collaboration/</p> <p>Top 13 Tools and Apps That Make Virtual Collaboration Possible https://www.aperianglobal.com/tools-apps-for-effective-virtual-collaboration/</p> <p>Virtual Collaboration By Harvard Business Review: 20 Minute Manager series: Animated Summary https://www.youtube.com/watch?v=l0emra64OpA</p> <p>What Is Virtual Collaboration? Definition and Helpful Tips https://www.indeed.com/career-advice/career-development/what-is-virtual-collaboration</p>

Module 9 Virtual collaboration (working in virtual teams)

The aim of Module 9 is to understand different type of virtual context: learning, working, and in general collaborating, to gain initial knowledge on how to prepare and be prepared for each context as well as to have some examples of platforms and activities that can facilitate virtual learning and virtual collaboration.

Due to the changes on the job market and also due to the pandemic that put pressure on transitioning to remote working and virtual learning environments, virtual collaboration became a trending topic for experts and a constant preoccupation for educators.

The transition from in class learning to virtual learning environments is not at all simple and requires a set of skills and some tools knowledge in order to facilitate the process and create an engaging context.

The same goes for any type of virtual collaboration since it implies more than transitioning to a different medium but adapting the methods and finding ways to foster collaboration and team engagement.

The objectives of Module 9:

1. Share experiences and good practices on creating effective virtual collaboration and learning contexts.

2. Learn different methods, tools, and games for creating an interactive virtual collaboration context.
3. Become exposed to various virtual platforms and better understand their use in various contexts.
4. Create their own strategy for fostering engagement.

The general part of this module contains theoretical knowledge about virtual environments and creating relevant and effective virtual collaboration settings. This module also provides a basic understanding of how to use different digital tools and platforms in the adult learning process. All exercises during this module are supposed to help to develop some practical skills in creating and participating in virtual environments.

Learning outcomes

By the end of Module 9 the adult educator will be able to:

- ✓ Understand virtual collaboration concept and be able to adapt the teaching style to promote an interactive learning context.
- ✓ Have access to different tools and platforms that can boost interactivity in virtual collaboration.
- ✓ Adapt the communication and teaching style for working in virtual environments.

Within this module adult educators will gain theoretical and practical knowledge on virtual collaboration, including different tools, platforms, and techniques.

This module is presented in 3 sub-modules, coherent with the main objectives of the module itself:

1. General Framework – working and learning in virtual environments.
2. How to create relevant and effective virtual collaboration settings.
3. Exercises and platforms for virtual engagement.

The first sub-module presents virtual contexts and environments, and also gives an opportunity to share experiences and try virtual icebreakers. The second sub-module is supposed to present behaviour enablers, artifacts, and nudges. Practical exercises including teamwork and

experience sharing will deepen the knowledge on how to create effective virtual collaboration. The focus of the third sub-module is on engaging virtual platforms and tools.

Sub-module 1 General Framework: – working and learning in virtual environments.

Structure:

Introduction – Ice Breaker Games (10’)

Various virtual contexts (5’)

Virtual learning environments (15’)

Experience sharing (10’)

Virtual icebreakers (15’)

Debrief (5’)

Sub-module 2: How to create relevant and effective virtual collaboration settings.

Structure:

Behaviour enablers, artifacts, and nudges (BEANs) (15’)

Teamwork (15’)

Dos and don’ts in virtual learning environments (10’)

Experience sharing (15’)

Debrief (5’)

Sub-module 3: Exercises and platforms for virtual engagement

Structure:

Introducing virtual platforms (5’)

Introducing tools for boosting engagement (15’)

Teamwork & Presentations (20’)

Debrief (15’)

Evaluation (5’)

Wrap up session.

Wrap up session is on a group discussion basis. Regarding the lesson content, the educator prepares some questions to discuss in order to get to know the most successful and challenging aspects of the training. Have participants mingle randomly in a large group and then instruct them to stop and share with the person in front of them one way in which that person “shined”

during the workshop. Repeat several times so that each person gets feedback and support from different people in the group. If there are an odd number of participants, the facilitator should address the odd person out each time.

Module 9 will use interactive methods of learning with the adult educators being engaged in activities through interactive sessions including discussions and quizzes, instructional methods, Power Point presentations with a series of on-line tools and assessment methods: YouTube, Downloadable Documents (Training Plans, etc.), social media for sharing and supporting this method will support both face-to-face learning and online learning. This Module will meet the needs of all learners with both the adult educators and the NEETs using a range of different learning methods.



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