Joint development, piloting and validation of entrepreneurial mindset and key skills curricula and training materials for third countries

Entrepreneurial Mindset and Key Skills for All

ERF CURRICULUM:

3. SCIENCE AND TECHNOLOGY

TASK ID AND TITLE 2.3: JOINT DEVELOPMENT OF THE CURRICULA AND TRAINING MATERIALS FOR ENTRECOMP

PARTNER RESPONSIBLE FOR THIS ACTIVITY: DIMITRA EDUCATION & CONSULTING

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PROJECT MAIN DETAILS

Programme: Erasmus+

Key Action: Lump Sum Grants

Project title: Joint development, piloting and validation of entrepreneurial mindset and key skills curricula and training materials for third countries

Project Acronym: EMSA

Project Agreement Number: 101092477

Start Date: 01/01/2023

End Date: 31/12/2025

COORDINATED BY

PROJECT PARTNERS

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TRAINING CURRICULUM FOR COMPETENCE: SCIENCE AND TECHNOLOGY

Aim of the workshop

The competence in Science and Technology involves understanding the basic principles, methods, and applications of scientific knowledge and technological innovation, and recognizing their impact on society. It also includes an awareness of the ethical, and social implications of technological advancements, encouraging responsible and informed decision-making.

Learning outcomes

After the end of the workshop, the participants will be in a position to:

In terms of knowledge:
- *Learners will understand the fundamental scientific and technological concepts and recognize their relevance in addressing societal challenges.*
- *Understand the principles and applications of the scientific method and technological tools in problem-solving and decision-making processes*
- *Recognize the impact of science and technology on individual empowerment and societal advancement*

In terms of skills:
- *Demonstrate the ability to use basic technological tools responsibly and analyze the social and ethical implications of science and technology in contemporary society.*
- *Apply scientific methods and technological tools to identify problems, formulate hypotheses, and conduct experiments, developing practical solutions that enhance business efficiency and support data-informed decision-making.*
- *Apply strategies to overcome technology-related anxiety by engaging with user-friendly tools and utilizing available digital resources effectively to build confidence in technology use.*

In terms of attitudes:
- *Develop curiosity and ethical behavior on technology use, including data privacy and social equity.*
- *Develop a proactive approach to learning and using technology ethically and sustainably.*
- *Take initiative in setting personal goals for technology skill development, seek guidance or support when needed, and maintain a positive approach*

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Training methodology

☒ Synchronous Online Learning

☒ Self-Directed Learning

Prerequisites

☒ Beginner level

☐ Specific skills required

☐ Previous workshops required

If the workshop requires specific skills or participation in previous workshops, please explain:

SYNCHRONOUS ONLINE LEARNING

Workshop duration

6 Teaching Hours per Unit Course

Training techniques

☒ Lecture (compulsory)

☒ Individual Exercise

☐ Group Exercise

☐ Role play

☐ Experiential Workshop

☐ Group Discussion

☐ Brainstorming

☒ Case Study

☒ Questions and Answers (multiple-choice and open-ended questions)

☐ Other (Please indicate) _____

Necessary equipment and materials

Equipment:
- ✓ e.g., Laptop/PC
- ✓ Internet Connection

Materials:
- ✓ PowerPoint presentation

Workshop programme breakdown

No.1	Theme/Content Science and Technology use in Society	Workload in minutes
Aim	The aim of this training is to provide learners with a foundational understanding of science and technology's role in shaping society and the economy, emphasizing how these fields drive progress in areas like healthcare, communication, education, and sustainability. Through exploring both the benefits and challenges associated with technological advancements, including ethical considerations like data privacy and fairness, learners will gain essential knowledge, practical skills, and a sense of responsibility to approach science and technology in a socially conscious and impactful way.	
1	Introduction to Science and Technology	45 minutes
	Structure Training Technique/Code of Methodological Tool	

	- Introduction to Science and Technology foundations - Examples	Lecture: PPT2.1_0 Ice Breaking:MT2.1_1	
2	Topic 1: Impact of Science and Technology on Society and Economy		90 minutes
	Structure	Training Technique/Code of Methodological Tool	
	- Science and Technology in Society and Economy - Impact on Society and Economy - Challenges and Risks - Comparative Analysis of Science and Technology in the EU and Third Countries	Lecture: PPT2.1_0 CaseStudy:MT2.1_2	
3	Topic 2: Ethical Use of Technology		90 minutes
	Structure	Training Technique/Code of Methodological Tool	
	- Data Privacy and Security - Best Practices for Data Protection - The Importance of User Consent - Challenges of Data Collection - Individual Rights and Transparency - Fairness in AI and Automation - Accountability and Transparency in Algorithm	Lecture: PPT2.1_0 VideoAnalysis: MT2.1_3 TrueorFalse:MT2.1_4	

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	• Ensuring Fairness and Ethical Standards	
4	Summary and Q&A		45 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Recap of key points • Open discussion	Lecture: PPT2.1_0	

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No.2	Theme/Content Key Technological and Scientific Skills	Workload in minutes
Aim	The aim of this course is to provide participants with foundational scientific and technological skills that enhance their problem-solving and decision-making abilities in various contexts.	
1	Introduction to Key Technological and Scientific Skills	45 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Science and Technology in Society and Economy • Impact on Society and Economy • Challenges and Risks	Lecture: PPT2.2_0 Ice Breaking:MT2.2_1	
2	Topic 1: Problem-Solving with Technology	90 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Using the Scientific Method for Problem-Solving • Steps of the Scientific Method	Lecture: PPT2.2_0 CaseStudy: MT2.2_2 TrueorFalse: MT2.2_3	
3	Topic 2: Decision-Making with Scientific Data	90 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Analytical Decision-Making • Steps in the Analytical Decision-Making Process	Lecture: PPT2.2_0 VideoAnalysis: MT2.2_4	

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	• Decision-Making in the EU vs. Third Countries	MultipleChoice: MT2.2_5	
6	Summary and Q&A		45 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Recap of key points • Open discussion	Lecture: PPT2.2_0	

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No.3	Theme/Content Building Confidence with Technology	Workload in minutes
Aim	The aim of this lesson is to empower participants to engage confidently with technology by building both practical skills and a positive mindset. It explores the transformative role of science and technology in society and provides strategies to overcome common anxieties related to tech use. Through understanding the benefits of technology, developing a resilient attitude toward learning new tools, and setting achievable goals, participants will gain the confidence needed to leverage technology in their personal and professional lives.	

1	Introduction on the benefits of Science and technology		45 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Benefits of Science and technology	Lecture: PPT2.3_0 Ice Breaking:MT2.3_1	

2	Topic 1: Overcoming Technology Anxiety		90 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Technology causing anxiety • Ways to deal with anxiety in Technology	Lecture: PPT2.3_0 VideoAnalysis:MT2.3_2 Multiple Choice:MT2.3_3	

3	Topic 2: Building Confidence with Technology		90 minutes
	Structure	Training Technique/Code of Methodological Tool	

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	• Building Confidence with Technology • Why Self-Confidence in Technology Matters • Strategies to Improve Tech Confidence • Developing a Positive Tech Mindset • Practical Tips for a Positive Tech Mindset	Lecture: PPT2.3_0 MultipleChoice: MT2.3_4 TrueorFalse: MT2.3_5	
4	Summary and Q&A		45 minutes
	Structure	Training Technique/Code of Methodological Tool	
	• Recap of key points • Open discussion	Lecture: PPT2.2_0	

List of methodological tools

No.	Training Technique	Code of Methodological Tool
1	Lecture	PPT2.1_0
2	Lecture	PPT2.2_0
3	Lecture	PPT2.3_0
4	Ice Breaking Activity	MT2.1_1
5	Case Study	MT2.1_2
6	Video Analysis	MT2.1_3
7	True or False	MT2.1_4
8	Ice Breaking Activity	MT2.2_1
9	Case Study	MT2.2_2
10	True or False	MT2.2_3
11	Video Analysis	MT2.2_4
12	Multiple Choice	MT2.2_5
13	Ice Breaking Activity	MT2.3_1

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14	Video Analysis	MT2.3_2
15	Multiple Choice	MT2.3_3
	Multiple Choice	MT2.3_4
	True or False	MT2.3_5

SELF-DIRECTED LEARNING

Resources

No.	Resource Title	Attachment (if applicable)
1	Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a research agenda on interventions. Decision Sciences, 39(2), 273-315.	
2	Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. MIS Quarterly, 19(2), 189-211.	
3	Zimmerman, B. J. (2000). Self-efficacy: An essential motive to learn. Contemporary Educational Psychology, 25(1), 82-91.	
4	Prensky, M. (2001). Digital natives, digital immigrants. On the Horizon, 9(5), 1-6.	
5	Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N. (2016). Aligning the organization for its digital future. MIT Sloan Management Review.	

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