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: [SCIENCE & TECHNOLOGY] – METHODOLOGICAL TOOLS

TASK ID AND TITLE 2.2: JOINT DEVELOPMENT OF THE CURRICULA AND TRAINING MATERIALS FOR ERF

PARTNER RESPONSIBLE FOR THIS ACTIVITY: MMC MEDITERRANEAN MANAGEMENT CENTER

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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

MMC Mediterranean Management Centre

PROJECT PARTNERS

Cyprus Certification Company

DIMITRA educational organization

have a dream

ARAB COLLEGE OF APPLIED SCIENCES

Jordan Youth Innovation Forum
الملتقى الأردني للإبداع الشبابي

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SUMMARY OF THE METHODOLOGICAL TOOLS

Competence Title	ERF Competence: SCIENCE & TECHNOLOGY
Learning Outcomes for the Competence	• *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 society.* • *Apply scientific methods and technological tools to identify problems, formulate hypotheses and support data-informed decision-making.* • ***Apply strategies to overcome technology-related anxiety and build confidence in technology use*** *In terms of **competences:*** • *Develop curiosity and ethical behavior on technology use, including data privacy and social equity.* • *Demonstrate responsibility and ethical awareness when applying technological solutions* • ***Take initiative in setting personal goals for technology skill development and maintain a positive approach***

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Methodological tool Type	Number of Methodological tools
☒ Lecture (compulsory)	1
☐ Open-ended questions	
☒ Closed questions	**1**
☒ Group discussion	**2**
☐ Brainstorming	
☒ Individual exercise / Case study	**1**
☒ Group exercise	
☐ Experiential workshop	
☐ Role play	
☐ Video projection and analysis	**1**
☐ Other (Please indicate)	
Total Number of Methodological tools:	

Referencing the Methodological tools

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PPT for PowerPoint Presentation/MT for other Methodological Tools + Competence number_Number_of_methodological_tool

Example:

PPT2.3_0 = PowerPoint presentation, on ERF competence Science & Technology, 1st tool

MT2.3_1 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

MT2.3_2 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

MT2.3_3 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

MT2.3_4 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

MT2.3_5 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

MT2.3_6 = Methodological tool, on ERF competence Science & Technology, 2.3 Topic

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COMPULSORY METHODOLOGICAL TOOLS

1. POWERPOINT PRESENTATION

Methodological tool Code and Title	Science & Technology 2.3_0 PPT
Competence Title	Science & Technology
Learning Outcomes covered by the Methodological tool	1. *Recognize the impact of science and technology on individual empowerment and societal advancement.* 2. *Apply strategies to overcome technology-related anxiety and build confidence in technology use.* 3. *Take initiative in setting personal goals for technology skill development and maintain a positive approach.*
Methodological tool Aim	To deliver a lecture on the topics and subtopics of the module.
Hints and tips for the trainer to use the Methodological tool	*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.*
Attachment for the usage of the Methodological tool	PPT2.3_0

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ADDITIONAL METHODOLOGICAL TOOLS

5. GROUP EXERCISE

Methodological tool Code and Title	SCIENCE & TECHNOLOGY MT2.1_1 Group Exercise
Competence Title	SCIENCE & TECHNOLOGY
Learning Outcomes covered by the Methodological tool	1. *Learners will understand the fundamental scientific and technological concepts and recognize their relevance in addressing societal challenges.* 2. *Demonstrate the ability to use basic technological tools responsibly and analyze the social and ethical implications of science and technology in society.* 3. *Develop curiosity and ethical behavior on technology use, including data privacy and social equity*
Methodological tool Aim	E.g., To practice individuals to reflect on the most important scientific and technological inventions
Hints and Tips for the trainer to use the Methodological tool	✓ E.g., Ensure that the participants understand the instructions for the activity fully before they start; clarify if necessary.
Attachment/s for the usage of the Methodological tool	Provided in the activity description below (if applicable).

Methodological Tool Title
MT2.3_1
Group Exercise/Individual Exercise Title (if different from the MT title)

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Explore and discuss the benefits of smartphones in daily life while considering their impact on your life.
Description of the Group Exercise/Individual Exercise
Start with a short discussion about how smartphones have become an integral part of modern life. *Highlight their widespread use in communication, productivity, and entertainment.*
Estimated Duration (broken down into steps, if necessary)
20 Minutes
General Guidelines (for the trainer)
2. Small Group Discussion (10-15 minutes) *Divide participants into small groups of 3-4 people.* *Assign the following questions to guide the discussion:* ***What are the main benefits of smartphones in your daily life?*** *Consider areas like communication, productivity, learning, and access to information.* ***How have smartphones improved your professional or personal life?*** ***Are there any surprising benefits you've experienced from using smartphones?*** *Encourage participants to share real-life examples or specific apps they use and their advantages.* *."*

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Instructions (for the participants)
Online Classroom Setting ***(if applicable)***
You use a mentimeter and set an open ended question to see their reaction

Methodological Tool Title
MT2.3_2
Group Exercise/Individual Exercise Title (if different from the MT title)
Discuss the following questions: • **Which of the listed reasons resonates most with you, and why?** 1. **Rapid Technological Advancements** 2. **Privacy and Data Security Concerns** 3. **Job Displacement** 4. **Social Disconnection.** 5. **Pressure to Adapt** 6. **Perceived Complexity of New Tools** 7. **Fear of Failure or Incompetence** **8. Overreliance on Technology**

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9. Remote Work Challenges • **Can you share a personal or professional experience where you faced one of these challenges?** • **Are there other reasons for technology anxiety that are not listed?**
Description of the Group Exercise/Individual Exercise
Start with a short discussion about: • **Which of the listed reasons resonates most with you, and why?** • **Can you share a personal or professional experience where you faced one of these challenges?** • **Are there other reasons for technology anxiety that are not listed?**
Estimated Duration (broken down into steps, if necessary)
20 Minutes
General Guidelines (for the trainer)
Instructions (for the participants)

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Online Classroom Setting ***(if applicable)***
You use a mentimeter and set an open ended question to see their reaction

Methodological tool Code and Title	**MT2.3_3**
Competence Code and Title	SCIENCE & TECHNOLOGY
Learning Outcomes covered by the Methodological tool	
Methodological tool Aim	
Hints and tips for the trainer to use the Methodological tool	
Attachment/s to use the Methodological tool	Provided in the activity template below (if applicable).

CASE STUDY

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Methodological tool Code and Title	SCIENCE & TECHNOLOGY MT2.3_3 Case Study
Competence Title	SCIENCE & TECHNOLOGY
Learning Outcomes covered by the Methodological tool	1. *Recognize the impact of science and technology on individual empowerment and societal advancement.* 2. *Apply strategies to overcome technology-related anxiety and build confidence in technology use.* 3. *Take initiative in setting personal goals for technology skill development and maintain a positive approach.*
Methodological tool Aim	To enhance individuals' understanding of the transformative role of science and technology in personal and societal progress while equipping them with strategies to overcome technology-related anxiety and build confidence in its use.
Hints and tips for the trainer to use the Methodological tool	
Attachment/s to use the Methodological tool	Provided in the activity description below (if applicable).

Methodological Tool Title
MT2.3_3
Video Title (if different from the MT Title)
Technology Related Anxiety - It's a Thing, Let's Talk About It!
Video Source (e.g., URL)
https://www.youtube.com/watch?v=1E6HYxlOpwc
Video Creator (Person/Organisation/Authority)
Jerad's Tech Tips & Reviews

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Video Duration (if a segment of the video should be projected, please indicate also start and end time)
12:01
Estimated Duration (of the Activity) (broken down into steps, if necessary)
30 Minutes

General Guidelines (for the trainer)
Jared from "State of Tech" reflects on the relationship between technology and anxiety, particularly through his experience of switching from an iPhone to a Galaxy Note 20 Ultra. Review the video and answer to the related questions **What issue did Jared highlight as a result of over-reliance on technology?** A. Difficulty keeping up with software updates. B. Increased feelings of anxiety when technology doesn't function as expected. C. Problems with battery life and device durability. **Answer: B** **What suggestion did Jared make to establish a healthier relationship with technology?** A. Turning off all notifications permanently. B. Setting digital boundaries, such as limiting phone use in the morning. C. Replacing smartphones with older, basic phones. **Answer: B**

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What does Jared believe is a common unintended consequence of integrating technology into daily life?

A. A loss of productivity.

B. Developing habits that unintentionally lead to stress and anxiety.

C. Spending too much money on the latest gadgets.
Answer: B

Instructions (for the participants)

Please review the following video and answer the following questions.

Debriefing Questions

Jared from "State of Tech" reflects on the relationship between technology and anxiety, particularly through his experience of switching from an iPhone to a Galaxy Note 20 Ultra.

Review the video and answer to the related questions

What issue did Jared highlight as a result of over-reliance on technology?

A. Difficulty keeping up with software updates.

B. Increased feelings of anxiety when technology doesn't function as expected.

C. Problems with battery life and device durability.

Answer: B

What suggestion did Jared make to establish a healthier relationship with technology?

A. Turning off all notifications permanently.

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B. Setting digital boundaries, such as limiting phone use in the morning.

C. Replacing smartphones with older, basic phones.

Answer: B

What does Jared believe is a common unintended consequence of integrating technology into daily life?

A. A loss of productivity.

B. Developing habits that unintentionally lead to stress and anxiety.

C. Spending too much money on the latest gadgets.
Answer: B

Remarks by the Trainer

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Methodological Tool Title
MT2.3_4
Group Exercise/Individual Exercise Title (if different from the MT title)
Reflect on your current technology-related skills and identify an area you'd like to improve. **What specific technology skill or tool would you like to learn or improve?** **What would success look like for you in this area?**
Description of the Group Exercise/Individual Exercise
Reflect on your current technology-related skills and identify an area you'd like to improve. **What specific technology skill or tool would you like to learn or improve?** **What would success look like for you in this area?**
Estimated Duration (broken down into steps, if necessary)
20 Minutes
General Guidelines (for the trainer)
Help participants develop a positive mindset toward technology by applying the strategies of setting personal goals, seeking support, and staying updated. ***Activity Steps*** ***1. Introduction (5 minutes)***

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Begin with a brief discussion about the importance of maintaining a positive attitude toward technology in both personal and professional contexts. *Highlight the three strategies:* *Set Personal Goals* *Seek Support* *Stay Updated* *Ask participants to reflect on their current technology-related skills and identify an area they'd like to improve.Provide prompts such as:What specific technology skill or tool would you like to learn or improve?* *What would success look like for you in this area?*
Instructions (for the participants)
Reflect on your current technology-related skills and identify an area you'd like to improve. Provide prompts such as: What specific technology skill or tool would you like to learn or improve?
*Online Classroom Setting **(if applicable)***
You use a mentimeter and set an open ended question to see their reaction

3.2 MULTIPLE-CHOICE QUESTIONS

Methodological Tool: MT2.3_5

Please select the correct answer from the options below.

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Statement: Which step in the scientific method involves proposing a testable solution based on observations?	
1. Observation	
2. Hypothesis	
3. Analysis	
Correct answer	2
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: What is a key characteristic of AI-driven decision-making?	
1. It relies solely on human intuition for decision-making.	
2. It uses large datasets and pattern recognition to enhance consistency and scalability.	
3. It avoids data analysis to save time.	
Correct answer	2
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: How does the EU approach decision-making differently from some third countries?	
1. The EU uses informal processes based on cultural norms.	
2. The EU emphasizes strict regulatory frameworks and data transparency.	
3. The EU avoids reliance on data for decision-making.	
Correct answer	2
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: What role does adaptability play in AI-driven decision-making?
1. It allows AI to continuously learn and adjust to new patterns and trends.
2. It limits AI to solving only predefined problems.

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3. It prevents AI from being used in dynamic industries.	
Correct answer	1
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: Why is sexual citizenship considered important in modern societies?	
1. Ensuring the fastest implementation regardless of outcomes	
2. Demonstrating responsibility and ethical awareness in decision-making	
3. Prioritizing cost-effectiveness over social impacts	
Correct answer	2
Level of Difficulty	☒ Low ☐ Medium ☐ High

MT2.3_6 Methodological Tool Title	
Please indicate whether the statement(s) below is/are true or false.	
Statement: **The scientific method includes the following four steps: Observation, Hypothesis, Experimentation, and Conclusion.**	
True	
False	
Correct Answer	False
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: **Technological skills focus exclusively on data analysis and software engineering.**	
True	
False	
Correct Answer	False
Level of Difficulty	☒ Low ☐ Medium ☐ High

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Statement: **AI-driven decision-making enhances fairness by reducing human biases and maintaining consistency across decisions.**	
True	
False	
Correct Answer	True
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: **Decision-making processes in third countries always adhere to the same strict regulations and data transparency as in the EU.**	
True	
False	
Correct Answer	False
Level of Difficulty	☒ Low ☐ Medium ☐ High

Statement: **The steps of the scientific method are essential for systematically improving technological solutions.**	
True	
False	
Correct Answer	True
Level of Difficulty	☒ Low ☐ Medium ☐ High

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