GUIDELINES FOR THE ETHICAL USE OF ARTIFICIAL INTELLIGENCE IN ADULT EDUCATION

Ethics, Pedagogy, and the Effective Use of AI

Innovation Footprint

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Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

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1. Introduction

Artificial Intelligence Artificial Intelligence (AI) is one of the most rapidly evolving technologies of the 21st century, profoundly affecting all areas of human activity: from work and the economy to daily life and education.

AI is no longer a future concept, but a present reality embedded in tools we use every day:

- digital assistants
- search engines
- content platforms
- text, image and video production applications

The development of generative artificial intelligence systems, such as large language models (LLMs), has created new opportunities but also new challenges. These systems can produce high-quality content, answer questions, support learning, and enhance creativity.

However, their use raises important issues:

- reliability of information
- ethical use
- personal data protection
- preserving human judgment and autonomy

In the context of adult education, AI is a powerful tool that can enhance the learning process, as long as it is used in a responsible, conscious and pedagogically documented manner.

This guide was created with the aim of offering:

- theoretical understanding of AI
- practical instructions for use
- ethical framework of application
- tools for trainers and trainees

This guide is primarily aimed at adult educators, learners and adult education organisations who wish to integrate Artificial Intelligence in a safe, ethical and pedagogically meaningful way. It can be used both as guidance material for daily educational practice and as a basis for the development of internal policies and learning activities.

2. Objectives of the Guide

This guide aims to holistically support the integration of Artificial Intelligence in adult education, focusing on both knowledge and practical application.

Specifically, it seeks to:

- To enhance understanding of the basic concepts of AI and its applications
- To cultivate skills for responsible and critical use of digital tools
- To offer clear and actionable guidelines for the use of AI

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- To support instructors in the educational use of technology
- To ensure academic integrity and authenticity of learning
- To encourage the active participation of learners

The guide is designed to function as both a theoretical framework and a practical tool. At the same time, the guide seeks to support adult education organizations in developing a shared culture of responsible use of AI, offering a reference framework for planning activities, guiding learners and formulating internal rules of use.

3. What is Artificial Intelligence (AI)?

Artificial Intelligence refers to computer systems that have the ability to perform functions that usually require human intelligence, such as:

- natural language understanding and production
- pattern recognition
- decision making
- content creation

In modern times, AI is mainly based on:

- Machine Learning
- Neural Networks
- Large data sets

AI is widely used in everyday life, e.g. in chatbots, recommendation systems and security filters. It is important to distinguish between AI systems that analyze data or support decision-making and generative AI tools, which generate new content, such as text, images, audio or video. The latter category is the one that directly affects educational practice today. The new generation of tools (Generative AI) can:

- creates texts
- produces images and videos
- simulates dialogue
- supports learning

This makes AI not only an information tool but also a creation tool.

4. AI in Adult Education

Adult education differs significantly from other forms of education, as it is based on principles such as:

- the autonomy of the learners
- the use of experience
- the need for immediate application of knowledge

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- goal -oriented learning

Artificial Intelligence can substantially enhance these principles, acting as a flexible and adaptive learning tool.

4.1 Role of AI in the learning process

AI does not replace the instructor or the learner, but functions as:

- **Supportive learning tool**

It provides explanations, examples and alternative approaches, adapted to the level of the learner.

- **Digital "partner"**

The learner can interact with the AI, ask questions, test ideas, and receive immediate feedback.

- **Creativity enhancing tool**

AI can act as a starting point for ideas, scenarios, activities or projects .

4.2 Pedagogical Benefits of AI

✓ **Personalized learning**

AI allows for content customization:

- at the level of knowledge
- at the pace of learning
- to the needs of each learner

This is particularly important in adult education, where there is great heterogeneity.

✓ **Immediate and continuous feedback**

AI can:

- corrects texts
- suggests improvements
- explains mistakes

This enhances **learning self-regulation** .

✓ **Support for different learning styles**

AI can provide:

- simple explanations

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- examples
- visualizations
- scenarios

Thus it covers different types of learning (visual, verbal, practical).

✓ Strengthening self-directed learning

Adult learners can:

- to learn independently
- to research issues
- to evaluate information

AI functions as “on- demand ” support.

✓ Boost participation and motivation

The use of AI:

- increases interest
- introduces innovation
- creates an interactive environment

4.3 Challenges and Risks

Despite the benefits, the use of AI carries significant risks.

⚠ AI addiction

Learners can:

- not develop critical thinking
- to rely entirely on the answers

👉 This reduces the learning value.

⚠ Inaccuracies and “ hallucinations ”

AI can:

- produces incorrect information
- presents false data as true

👉 Verification is always required.

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⚠ Bias

AI systems are based on data that may contain:

- stereotypes
- inequalities

👉 This may affect the content.

⚠ Privacy issues

The entry of personal data can:

- violates GDPR
- creates safety risks

4.4 Pedagogical Use of AI

The pedagogical use of AI requires a conscious selection of tools and strategies that serve specific learning objectives. Its use should not be based on the logic of innovation for innovation's sake, but on its potential to enhance participation, understanding, feedback and active learning. In adult education environments, where learners often have different levels of experience, available time and learning motivations, AI can function as a tool for differentiation and personalization. However, to have pedagogical value, it must be part of an organized instructional design, accompanied by clear instructions for use and linked to measurable learning outcomes.

AI can be integrated into:

- **Teaching**
  - material creation
  - examples
  - differentiation
- **Evaluation**
  - formative assessment
  - self-assessment
- **Activities**
  - creative projects
  - content analysis
  - problem solving

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4.5 The Role of the Trainer

The trainer is transformed from:

👉 " knowledge provider "

to

👉 "learning guide"

His role includes:

- guidance on the use of AI
- development of critical thinking
- ensuring ethical use

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5. Basic Principles of Ethical Use of AI

The ethical use of AI is a key prerequisite for its safe and responsible integration into education.

5.1 Transparency

Transparency concerns clear information about:

- the use of AI
- the way content is produced

Trainees must:

- to declare when they use AI
- understand that content is not always reliable

Transparency:

- strengthens trust
- promotes responsibility

5.2 Justice and Impartiality (FTNrness)

AI should be used without:

- discrimination
- prejudices
- stereotypes

Users must:

- to avoid biased prompts
- to critically evaluate the answers

👉 Education must promote equality.

5.3 Data Protection (Privacy & Safety)

Privacy is critical.

It is prohibited:

- entering names
- personal information
- sensitive information

Recommended:

- use of hypothetical examples

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- maintaining anonymity.

GDPR compliance is essential.

5.4 Responsibility and Human Supervision (Accountability)

AI is not responsible, the user is.

Trainees must:

- to check the answers
- to assess accuracy
- to take responsibility

The trainer:

- supervises
- guides
- intervenes when necessary

5.5 Academic Integrity

The use of AI must be consistent with:

- authenticity
- originality
- sincerity

Violations:

- use of AI without declaration
- full copy
- deception

👉 AI should not replace thinking.

5.6 Critical Thinking and Digital Literacy

The use of AI must be accompanied by:

- information evaluation
- intersection of sources
- reflection

Education is not about:
👉 "what does the AI say"
but
👉 "how do I evaluate it"

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5.7 AI as a tool, not a substitute

The basic principle is:

👉 AI supports, does not replace.

Learning remains:

- human process
- active
- review

The above principles do not operate in isolation, but as a unified framework for responsible use. Transparency without accountability is not sufficient, just as innovation without data protection is not pedagogically or ethically acceptable. The ethical use of AI in adult education requires a balance between harnessing the potential of technology and preserving human judgment, equality and integrity.

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6. Instructions for Trainees

The use of Artificial Intelligence by adult learners requires the development of a responsible, critical and conscious attitude. AI is not just a content production tool, but a learning medium that must be strategically utilized.

6.1 AI as a learning tool

Learners are invited to perceive AI as:

- supporting comprehension tool
- means of investigation and discovery
- improvement and reflection tool

Its use should enhance:

- the thought
- the analysis
- creativity

and not to replace personal effort.

6.2 Responsible use

Responsible use of AI includes:

- Checking the accuracy of information
- Critical evaluation of responses
- Combining AI with personal thinking
- Transparency in use

Learners must understand that:

👉 AI can make mistakes

👉 the responsibility lies with the user themselves

6.3 Developing critical thinking

The use of AI must be accompanied by questions such as:

- Is this information reliable?
- Are there other sources that confirm it?
- Is there a possible bias?

The development of these skills is essential for modern learning.

6.4 Learning management

Learners should use AI:

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- as a support tool
- not as an "easy solution" tool

Learning is effective when:

- there is active participation
- the information is being processed
- there is a personal contribution

6.5 Limits of use

Trainees must clearly know:

May:

- use for understanding
- writing support
- idea generation

Not allowed:

- complete job replacement
- use without reference
- misleading use

6.6 Practical Instructions for Use

- **Before using AI** , learners should clarify their goal: do they want to understand a concept, generate ideas, improve a text, or check an answer?
- **When using** , they should formulate clear prompts , avoid entering personal data, and critically evaluate the responses they receive.
- **After use** , it is important to check the correctness of the content, adapt it based on their own thinking, and declare the use of AI where required.

This approach helps the learner use AI not passively, but as a means of active learning.

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7. Prompts Creation Guide

Creating prompts is one of the most critical skills in using AI and is directly linked to the learning process.

7.1 Prompting as a skill

Prompting is not a simple question, it is :

- design thinking
- goal formulation
- information organization

It is a form of " micro -teaching", as the user:

- sets goals
- structures content
- guides the process

7.2 Basic characteristics of a good prompt

An effective prompt should be:

✓ **Clear**

Leave no room for ambiguity

✓ **Specific**

To define:

- theme
- level
- target

✓ **Oriented**

Describe the desired result (e.g. shape, size)

Prompt structure

A complete prompt includes:

- Role (e.g. "acting as a trainer")
- Theme
- Target audience
- General objective
- Response format

Example 1

Ineffective prompt : "Write something about technology."

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Improved prompt : "Write a short 200-word informational text about the benefits and risks of Artificial Intelligence, suitable for beginner-level adult learners."

Example 2

Ineffective prompt : “Explain GDPR to me .”

Improved prompt : “Explain the basic principles of GDPR in simple language and give two examples related to the use of AI tools in adult education.”

7.4 Iterative process (Iteration)

Creating prompts is a dynamic process:

- essay
- evaluation
- improvement

Trainees must:

- reformulate
- add details
- adapt

7.5 Connection to learning

Prompting reinforces :

- learning design
- clarity of goals
- metacognitive ability

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8. Regulations for the Use of AI

The existence of a clear and structured regulation for the use of Artificial Intelligence is a basic prerequisite for its safe, responsible and pedagogically sound integration into adult education. In an environment where AI tools are constantly evolving and their use is not yet fully regulated, the regulation functions as a guiding framework for both educators and learners.

8.1 Purpose of the regulation

The regulation aims to create a common and clear framework for the use of AI, which:

- ensures the ethical and responsible use of tools
- prevents abuse or misleading use
- enhances transparency and trust in the learning process
- users' personal data and privacy

Furthermore, it helps clarify expectations, reducing ambiguities about what is allowed and what is not.

8.2 Basic principles

The regulation is based on four fundamental principles:

◆ **Transparency**

The use of AI must be clearly stated. Learners must be able to recognize when content has been produced with the help of AI.

◆ **Responsibility**

The responsibility for the content produced always belongs to the user and not to the tool. AI does not eliminate the need for control and evaluation.

◆ **Integrity**

The use of AI must respect the principles of academic integrity and authenticity.

◆ **Security**

The use of AI tools must be done in a way that protects data, avoids risks, and ensures the well-being of users.

8 .3 Content of the regulation

A comprehensive AI usage regulation should include:

✓ **Permitted uses**

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AI can be used for:

- learning support
- idea generation
- understanding of concepts
- language support

❌ **Prohibited uses**

Not allowed:

- submitting fully AI- generated work as personal work
- the use of AI in exams without permission
- the creation of misleading or harmful content

📌 **AI usage report**

Trainees must declare:

- when did they use AI
- at what stage
- for what purpose

🔐 **Data protection**

It is strictly forbidden to import:

- personal information
- sensitive data
- third party information

8.4 Participatory approach

The development of the regulation should not be an exclusively administrative process, but a participatory one.

Trainee involvement:

- enhances understanding of the rules
- increases acceptance
- strengthens responsibility

The creation of the regulation can be done through:

- group discussions

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- laboratories
- co-design activities

8.5 Implementation and review

The regulation must be:

- clear and understandable
- practically applicable
- flexible and adaptable

Given the speed of AI development, its periodic revision is necessary to respond to new technological and educational needs.

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9. Educational Activities

In adult education, AI-based activities are most effective when linked to authentic problems, real-world needs, and practical application scenarios. Adult learners learn most meaningfully when they recognize the usefulness of what they are doing and when they can transfer the new knowledge to work, their personal lives, or their participation in society.

9.1 Role of activities

Activities using AI:

- transfer learning from the theoretical to the practical level
- enhance active participation
- create opportunities for experimentation

Experiential learning is particularly important in adult education, as it is directly linked to the application of knowledge.

9.2 Types of activities

🔹 **Investigative activities**

The trainees they use AI for :

- search information
- comparison sources
- evaluation reliability

👉 Strengthens or informative education .

🔹 **Creative activities**

AI is used for:

- writing texts
- image creation
- development of ideas

👉 Creativity and expression are enhanced.

🔹 **Reflective activities**

The trainees:

- evaluate the results of AI
- identify errors
- reflect on the process

👉 Critical thinking is developed.

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9.3 Utilization of AI in pedagogical activities

The integration of Artificial Intelligence into educational activities is not just a technical choice, but a pedagogical strategy that requires planning, targeting and guidance. AI can function as a multidimensional tool, which supports different phases of the learning process, from the introduction of a topic to the assessment of learning.

- **AI as a learning support tool**

In this context, AI is used to:

- providing explanations and examples
- simplification of complex concepts
- adapting content to the learner's level

For example, a learner can ask an AI system to explain a concept “in plain language” or provide practical application examples. This enhances understanding and facilitates differentiated learning.

- **AI as an investigative tool**

AI can be used as a means of exploration and knowledge discovery. Learners can:

- to ask questions
- to compare different answers
- to seek alternative perspectives

For example, they may ask:

- different interpretations of a phenomenon
- arguments for and against an issue
- analysis of a problem from different perspectives

This process enhances investigative learning and cultivates the ability to evaluate information.

- **AI as an evaluation tool**

AI can also be utilized in the evaluation process, mainly at a formative level. Specifically:

- provides immediate feedback
- suggests improvements
- helps with self-assessment

For example, a learner can:

- submit a text and request comments

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- to compare their own work with an AI- generated version
- to identify errors and correct them

However, it is crucial that AI does not replace the instructor in the final assessment, but rather functions in a supportive manner.

🔹 **Conditions for effective use**

The use of AI in activities must meet specific pedagogical conditions:

👉 **Guided use**

Learners need clear instructions on how to use AI. Uncontrolled use can lead to superficial learning or incorrect conclusions.

👉 **Targeted integration**

The use of AI should serve a specific learning goal and not be an end in itself. Technology should serve learning, not determine it.

👉 **Connection to learning outcomes**

Every activity involving AI must be clearly linked to certain learning outcomes , such as:

- development of critical thinking
- understanding of concepts
- problem solving

Example of pedagogical activity with AI

Activity: Comparison of human and AI response

1. Learners write a short response to a topic
2. They ask AI to give a corresponding response
3. They compare the two results
4. They discuss:
    - which one is more accurate
    - which one is more understandable
    - which contains errors or biases

👉 This activity strengthens critical thinking and awareness of the limitations of AI.

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9.4 Skill Development through AI

The integration of Artificial Intelligence into the educational process contributes substantially to the development of a wide range of skills, which are crucial for the modern knowledge society.

- **Critical thinking**

AI should not be accepted uncritically as “authority.” Instead, learners are encouraged to:

- they question the answers
- identify inaccuracies
- cross-reference information

Constant interaction with AI creates opportunities for the development of analytical and critical thinking.

- **Collaboration**

AI activities can be designed with a collaborative nature, where learners:

- they work in groups
- discuss the results
- make joint decisions

AI functions as a shared tool that enhances collective exploration and collaboration.

- **Creativity**

AI can be a starting point for creative expression. Learners can:

- to generate ideas
- to create content
- to experiment with different forms of expression

However, creativity is not limited to producing content, but extends to transforming, improving and adapting it.

- **Digital Digital Competence**

The use of AI enhances basic digital skills, such as:

- use of digital tools
- understanding technological capabilities
- information management

At the same time, it contributes to the development of AI literacy , i.e. the ability to:

- to understand how AI works

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- to use it effectively
- to recognize its limitations

◆ **Metacognitive skills**

The use of AI also enhances metacognition , as learners:

- they think about how they learn
- evaluate the process
- improve their strategies

◆ **Connecting with 21st century skills**

The skills developed through AI are directly linked to:

- adaptability
- problem solving
- lifelong learning

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

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10. Instructions for Trainers

Trainers are the key factor in the successful integration of AI.

10.1 The new role of the trainer

The trainer is no longer just a carrier of knowledge, but:

- guide of the learning process
- activities coordinator
- skills development supporter

10.2 Pedagogical design

The use of AI should be part of:

- clear learning objectives
- organized activities
- evaluable results

Technology should not be used in isolation, but as part of a comprehensive teaching plan.

10.3 Classroom management

The trainer is asked to:

- sets clear rules of use
- monitors the use of AI
- intervenes when necessary

Classroom management also includes technology management.

10.4 Trainee support

The trainer:

- guides the correct use
- boosts self-confidence
- provides feedback

1 0.5 Continuing education

Continuous training is essential, as:

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- AI is constantly evolving
- new tools appear
- practices change

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11. Impact

The integration of Artificial Intelligence into adult education is not simply a technological innovation, but a substantial pedagogical reform that affects multiple levels of the learning process and the operation of educational organizations.

This impact is not immediate or one-dimensional, but is gradually shaped through the interaction of learners, trainers, and the organization with AI tools.

11.1 At the trainee level

The use of AI transforms the role of the learner from a passive receiver of knowledge to an active manager of their learning path.

More specifically, it is observed:

- **Strengthening autonomy in learning**

Trainees gain the ability to:

- they learn at their own pace
- they seek personalized explanations
- repeat and deepen where necessary

This leads to greater self-confidence and active engagement in the learning process.

- **Development of critical and analytical thinking**

Continuous interaction with AI creates the need to evaluate information. Learners are asked to:

- identify inaccuracies
- compare sources
- they question the results

In this way, learning shifts from memorization to analysis.

- **Development of digital and AI skills**

Trainees acquire skills related to:

- the use of digital tools
- the wording of prompts
- information management

These skills are directly linked to the DigComp framework and are essential skills of the 21st century.

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- **Improving the learning experience**

The use of AI makes learning:

- more interactive
- more personalized
- more attractive

This leads to increased motivation and greater participation.

11.2 At the trainer level

The integration of AI redefines the role of the trainer and enhances their professional development.

- **Transformation of the pedagogical role**

The trainer moves from transmitting knowledge to facilitating learning, taking on the role of:

- guide
- advisor
- supporter

- **Strengthening teaching practices**

AI offers tools that allow:

- teaching differentiation
- creation of educational material
- personalized support

This leads to more flexible and tailored teaching approaches.

- **Professional development and innovation**

The trainers:

- become familiar with new technologies
- develop new skills
- participate in innovative practices

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

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AI acts as a lever for professional development.

11.3 At the organizational level

At an organizational level, the integration of AI contributes to the overall modernization of the educational process.

- **Digital transformation**

The use of AI enhances:

- the digital maturity of the organization
- the integration of innovative tools
- improving learning services

- **Improving education quality**

The use of AI leads to:

- more effective teaching
- better student support
- upgraded learning experience

- **Strengthening competitiveness**

Organizations that incorporate AI:

- are differentiated
- attract more learners
- meet modern requirements

11.4 Long-term impact

The impact of AI on adult education extends beyond the immediate learning environment.

- **Developing skills of the future**

Trainees acquire skills such as:

- adaptability
- solving complex problems

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

- collaboration with technology

◆ **Strengthening lifelong learning**

AI supports a learning model that is:

- continuous
- flexible
- self-guided

◆ **Social and professional adaptation**

Familiarity with AI helps learners to:

- join the labor market
- adapt to technological changes
- actively participate in the digital society

The above impact can be captured both qualitatively and quantitatively, through tools such as pre- and post-guide questionnaires, observation of learner participation, analysis of work produced, and reflective journals. Systematic impact assessment is important so that the integration of AI is not based on assumptions, but on documented data.

Με τη συγχρηματοδότηση της Ευρωπαϊκής Ένωσης

12. Conclusion

Artificial Intelligence is a powerful agent of change, which has the potential to redefine adult education.

Its successful exploitation does not depend only on technology, but mainly on:

- how to use it
- the pedagogical framework
- the ethical approach

AI doesn't replace learning — it transforms it.

Education remains a deeply human process, which is based on:

- in critical thinking
- in creativity
- in the interaction

This guide aspires to contribute to the creation of an educational environment where AI is utilized:

✓ responsibly
✓ with purpose
✓ with epicenter him man

The use of Artificial Intelligence in adult education is not a temporary trend, but part of a broader transition towards more flexible, personalized and technologically enhanced learning environments. For this reason, the development of common principles, clear rules and pedagogically grounded practices is a necessary condition for its sustainable and humane integration into educational practice.

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ANNEX - Practical Tools and Worksheets for Using AI in Adult Education

This appendix includes ready-made worksheets and tools that can be used directly in the educational process. The aim is to enhance the critical use of AI, understand ethical issues and develop practical skills.

Worksheet 1: Prompt Improvement

Target

Developing skills in formulating effective prompts .

Part A: Problem Identification

Read the following prompts and identify the problems:

1. "Write something about technology"
   👉 What's missing?

   ……

2. “Tell me about the economy”
   👉 Is it clear?

   ……

Part B: Improvement

Make prompts more effective:

Example:
Original: “Write something about education” Improved:

……
……

Part C: Creating your own prompt

Topic: _____

Objective: _____

Audience: _____

Response format: _____

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👉 Write the prompt :

……
……

Worksheet 2: Ethical Assessment of AI

Target

Developing a critical attitude towards AI responses.

Instructions

He read an answer given by AI and replied:

✓ Reliability

- Is the information correct?
  ☐ Yes ☐ No ☐ Not I am sure

✓ Transparency

- Do you know if the answer is based on real data?
  ☐ Yes ☐ No

✓ Possible prejudice

- Are there stereotypes or a one-sided view?
  ☐ Yes ☐ No

✓ Use data

- Does it include personal data?
  ☐ Yes ☐ No

Conclusion

👉 Would you use this answer? Why?

……
……

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Worksheet 3: AI vs Human Thinking

Target

Understanding differences between AI and human thinking.

Activity

1. Write a short answer to a question:

   ……..

2. Ask AI to provide an answer to the same issue.

Comparison

Criterion	Your answer	AI response
Accuracy		
Creativity		
Understanding		

Discussion

👉 Which one is better and why?

……..

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Worksheet 4 : Identifying Bias

Target

Identifying biases in TN content .

Activity

Read the following text (from TN):

"Today, more and more people are choosing to work from home, as it is considered a more comfortable and easy way to work. Younger workers, who are more familiar with technology, adapt much faster to this model and are usually more productive."

In contrast, older workers struggle to keep up with digital developments and are often less productive when working remotely. Also, people in more practical professions cannot easily respond to such changes, as their work does not require specific digital skills.

For this reason, remote work seems to be more suitable for young professionals and those who already have a high level of education and technological knowledge.”

Questions

- Is there prejudice?
- Which group is affected?
- How would you improve it?

👉 Answer:

…… ……..

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Worksheet 5: Data Protection Scenario

Target

Understanding privacy risks .

Scenario

A learner enters:

- student names
- personal data
- work items

on a TN tool .

Questions

1. What is the problem?

   …… ……..

2. What rules does he break?

   …… ……..

3. How would you avoid it?

   …… ……..

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