THEME CARD

Artificial Intelligence (AI)

Artificial Intelligence (AI) refers to the ability of computers to display human-like capabilities such as reasoning, learning, planning and creativity. Societies benefit from AI in many ways, as AI is widely used in social media, banking and in accessing information. The development of AI effects the skills needed in life. This naturally influences education as well. AI provides a lot of new pedagogical possibilities to personalize learning and support students with special needs.

Citizens in modern societies will need at least a basic understanding of AI and how it effects e.g., participation, democracy and freedom of speech. *Computational thinking skills* and data skills are needed to understand automated decision making and the use of machine learning. AI is already used in areas such as social media, hybrid influencing, internet search services, or banking. *AI literacy* will be a key element in tackling potential risks related to AI such as disinformation.

DigComp 2.2 framework's latest version includes AI-related requirements and examples.

Requirements for citizens interacting with AI systems[3]

Knowledge To be aware of what AI systems do and what they do not do and to understand the benefits, limitations and challenges of AI systems.

Skills to use, interact and give feedback to AI systems as an end-user and to configure, supervise and adapt AI systems (e.g. overwrite, tweak).

Attitudes, that includes human agency and control, critical yet open attitude and ethical considerations of AI usage.

Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators[4] has identified four key considerations that underpin the ethical use of AI and data in teaching, learning, and assessment. These are human agency, fairness, humanity, and justified choice.

- **Human agency** relates to an individual's capability to become a competent member of society. A person with agency can determine their life choices and be responsible for their actions. This underpins concepts such as autonomy, self-determination, and responsibility.
- **Fairness** relates to everyone being treated fairly. All users should have equal access to opportunities with AI. These include equity, inclusion, non-discrimination, and fair distribution of rights and responsibilities.
- **Humanity** addresses consideration for the people, their identity, integrity, and dignity. The human-centric approach to AI takes these into consideration.
- **Justified choice** relates to the use of knowledge, facts, and data to justify necessary or appropriate collective choices by multiple stakeholders in the environment. It requires transparency and collaborative models of decision-making as well as explainability.

These ethical considerations are intrinsically valuable and worth striving for in education. They guide educators and school leaders in their decisions about the use of AI systems in education.

Questions to ponder:

1. **How can we create learning opportunities to develop the competencies necessary for understanding AI?**
2. **How to promote human centric use of AI?**
3. **What are the challenges of AI?**
4. **How do we need to consider the EU AI Act in education?**
5. **What kind of privacy and security issues should be considered when using AI?**

For refences and more information:

1. Artificial Intelligence | Shaping Europe's digital future https://digital-strategy.ec.europa.eu/en/policies/artificial-intelligence
2. Digital Education Action Plan 2021-2027: https://education.ec.europa.eu/focus-topics/digital-education/action-plan
3. DigComp 2.2: https://publications.jrc.ec.europa.eu/repository/handle/JRC128415
4. Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for educators: https://op.europa.eu/s/z1CM
5. EU AI Act https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai