ETH-TECH

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Ethics of AI and data in Education

The situated ETH-TECH perspective: A framework for practice

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Anchoring Ethical Technology (AI and data) Usage in the Educational practice (ETH-TECH)
https://eth-tech.eu/

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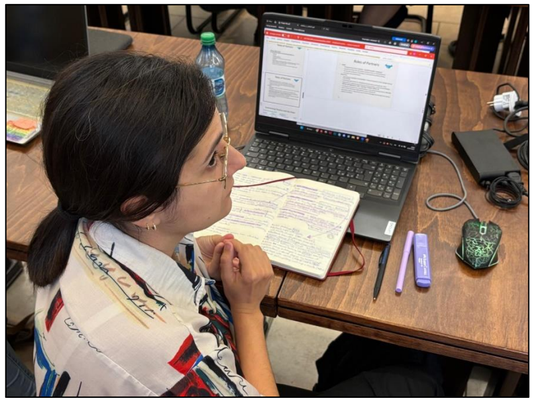


The ETH-TECH Partnership

https://eth-tech.eu/

Why does the ETH-TECH Framework matter?

The aim of this framework is to provide support to future educators (and teachers and educators' trainers) to reflect about the ethics of AI and data in education. ETH-TECH critically integrates the **7 principles on the use of AI and data in education proposed by the European Commission in 2022**. Moreover, we consider the recent developments related to the **AI Act (European Commission, 2024)** for higher education.

How is the ETH-TECH Framework organized?

Analyse the role of culture

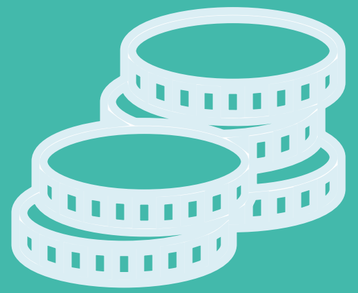
Guiding reflection questions

Who regulates the ethical use of AI in education in your country?

How much flexibility does your university have in enforcing ethical use of AI in education?

Do you feel protected yet responsible when you experience a breach in ethical use of AI in education in your practice?

How is the ETH-TECH Framework organized?



Consider the national and local socio-economic dynamic

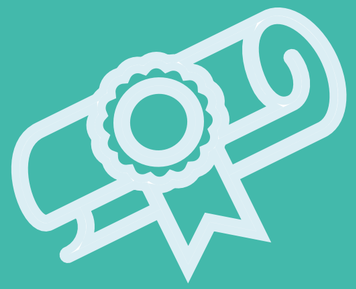
Guiding reflection questions

Who provides resources (information, training, assistance for critical problems) for ethical use of AI in your regions?

Is the ethical use of AI for education legally regulated and are there resources to ensure the implementation of these regulations?

Do teachers and students have the socio-economic resources (time, education how AI works, tools and skills for critical reflection) to ensure ethical use of AI in their educational practice?

How is the ETH-TECH Framework organized?



Understand the structure of the specific educational system

Guiding reflection questions

Does your university or your national Ministry of Education decide on the ethical guidelines for AI in education?

Do teachers and students in your university benefit from training on the ethical use of AI in education?

Can you autonomously integrate ethical guidelines of AI use in education in your course syllabi?

Who can you contact when there is an ethical breach of AI use in education?

The situated ETH-TECH perspective: A framework for practice

Normative/ Technological Level

- International regulations
- National and institutional available information

Institutional Level

- Institutional available information
- Institutional tech tools
- Institutional regulations and codes of practice

Personal Level

- Teaching Practice and professionalism
- Academic Integrity
- Personal positionality

Learning Community Level

Levels to understand the ethics of AI and data in the educational practice

The situated ETH-TECH perspective: A framework for practice

The three EU principles that the ETH-TECH framework focuses on are:

- ✓ **Human agency and oversight**
- ✓ **Transparency**
- ✓ **Diversity, non-discrimination and fairness**

Each principle is presented through an **intuitive definition**, a **case-study with guiding questions**, and **practical recommendations** for institutions, teachers and students using a problem-action point format.

The situated ETH-TECH perspective: A framework for practice

AI systems need to clearly explain how they function, what data they collect and for what purposes. Students, teachers and universities should be informed about these aspects so they can give their informed consent when using AI systems.

Friendly definition

case-study

A university introduces an AI-powered software that assists students in their learning. It works as a virtual assistant which gives students detailed instructions and feedback on their tasks but also includes emotional support to help students manage their mental health during times of academic stress. Both students and teachers are happy to use this free system: students appreciate the immediate and personalized assistance, while teachers appreciate the reduced workload. However, some students notice that they began receiving ads for paid study materials, online courses and tutoring services. Some of them also received adds for mental health services, and apps targeted on issues like those discussed with the software's chatbot. Over time, students and teachers become sure that the data is shared with third parties and used for commercial profiling.

Guiding Questions

Do you know what data is collected during your interactions with AI systems you use in your educational context and how it is later used?
Would knowing your data is shared for commercial profiling influence if and how you (as student, teacher or institutional educational staff) use AI systems?

The situated ETH-TECH perspective: A framework for practice

Action Points: Institution

Transparency

Problem: Teachers and students point out that the AI systems officially used by the university are linked to commercial platforms that offer personalized solutions based on class work.
Action point: Promote transparency about how data and algorithms work. Request the AI system provider to provide and explain how data collected from university users are used and shared.

Problem: Administrators and teachers point that existing university-level regulations cannot be used to integrate ethical aspects of AI for education.
Action point: Make shared decisions about tool usage and curriculum-integrated ethics as approaches aligned with participatory pedagogies and democratic education.

Action Points: Teacher

Transparency

Problem: Integration of AI-generated materials in the course can be useful as practical examples for many subjects. Nevertheless, when the teacher generates material using complex prompts for a genAI agent, it is not clear who owns the product and how it will be used by the AI developer company in the future.
Action point: When given the possibility, always opt for an open-source solution to generate new course material or a genAI solution that is transparent about data storage and sharing.

Problem: As teachers use multiple AI and genAI tools in their teaching practice, it may be difficult to keep track which tools are transparent on their data sharing practices.
Action point: Take time at the beginning of each year to choose the AI solutions you will use for education. Then gather information on how the information you input into AI systems for education is being stored, shared, and

Action Points: Student

Transparency

Problem: genAI is easy to use and offers quick answers starting from very simple questions. But students become increasingly aware that their choices when using AI for education are transferred to other platforms that may not be linked to education.
Action point: Understand what the "digital footprint" means. Each choice made online, even when using AI for education is owned by a company. There are multiple negative ethical implications of educational contents and educational decisions that are monetized without the awareness and active consent of the user.

CASES

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Cases creation process

- Initial cases developed by the UNIPD team, based on the literature connected to the seven EU principles (e.g., chatbots usage for cognitive or emotional support, learning analytics, such as data-tracking, academic integrity issues)
- Cases were tested and discussed with university students from the partner countries during awareness-raising sessions
- In Romania: 3 sessions with 3° year Bachelor students from Babes-Bolyai University following the following general outline:

1. Introduction: What is AI? How are students using it in their lives? How do they feel about AI?
2. Pair activity: Discussing specific case studies dealing with ethical dilemmas around AI usage
3. Sharing insights in plenary: Each team briefly presented their case study and their insights

Identification of the most relevant cases and principles and those which sparked the most insightful discussions on the ethical use of AI & additional refinement of the most relevant cases

Example: Human Agency and Oversight

What does this principle mean?

Ed-Tech enhanced by AI should help students reach their academic goals and work with colleagues and teachers to create better schoolwork. At each point, it is key that teachers have control and oversight of the AI-supported products so they can intervene in cases of errors, misinformation, discrimination and student overreliance on the systems.

In a software certification course, there is a very active group of participants who promote informal support for the study. In this regard, they have opened a Whatsapp channel to support each other in their learning efforts. Within this group, it emerges that the use of AI tools such as Claude or Copilot is perfect for writing a programming assignment required in one of the teachings.
The teacher is not aware of the tool and does not have access to efficient tools for detecting AI-generated content, as they have not been developed yet.
Therefore, many students create their entire assignment with AI. Despite some surprise at the unusually high work quality of this generation of students, the teacher does not worry much: the more participants are certified, the higher the success rate of the course, the better the remuneration. The use of AI in students' work is not discussed during the course, and students begin to use AI as a shortcut to completing their assignments rather than a tool that can assist them in their learning.

Can you relate to this situation? In your local educational context, do you think students can use AI as a tool that impairs their learning process, despite seemingly leading to good results?

Always considering your university and local context, what responsibilities do students, teachers, and other staff have in making sure AI supports the learning process while also respecting academic integrity?

ETHTECH

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