ETHTECH

Co-funded by
the European Union
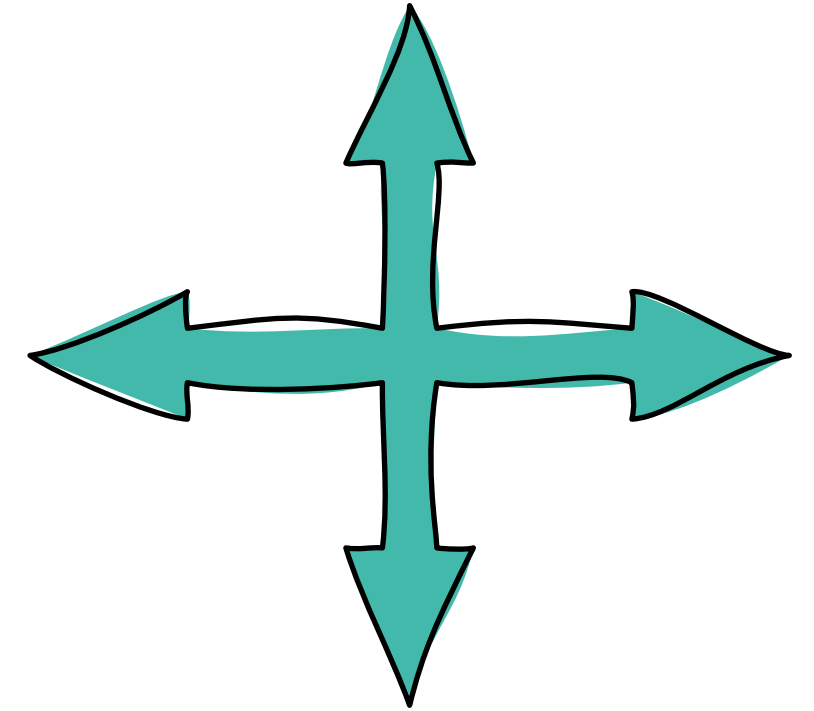
Ethics of AI and data in Education

ONLINE SEMINAR - International Awareness Raising Session
INTRODUCTION

UNIVERSITAT DE BARCELONA

MED associazione italiana media education

Università DEGLI STUDI DI PADOVA

HELMUT SCHMIDT UNIVERSITÄT
Universität der Bundeswehr Hamburg

UNIVERSITATEA BABEȘ-BOLYAI
BABES-BOLYAI TUDOMÁNYEGYETEM
BABES-BOLYAI UNIVERSITÄT
BABES-BOLYAI UNIVERSITY

Anchoring **ETH**ical **TECH**nology (AI and data) Usage in the Educational practice (ETH-TECH)
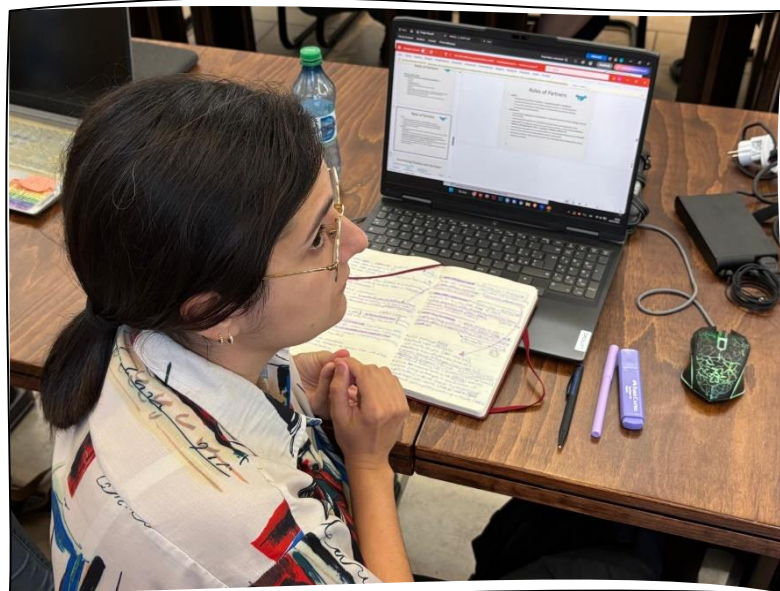
ETH-TECH objectives

- To **raise awareness** among future educators about ETH-TECH perspectives in HE courses.

- To develop a set of **practical tools** for the integration of an ETH-TECH approach in HE, based on EU guidelines.

- To support the development of an ETH-TECH approach through a set of **open educational resources (OERs)**.

- To foster **creative engagement of key stakeholders** towards the ETH-TECH.

The ETH-TECH Partnership

https://eth-tech.eu/

Technological
Evolution
and the
Geopolitical
situation of
Europe

*Ethics as
a response?*

GDPR (2016)
Ethics guidelines for trustworthy AI (2019)
Ethical Guidelines on AI and Data in
Education (2022)
AI-ACT (2024)

EIT (2020)

https://www.eitdigital.eu/fileadmin/2022/e
cosystem/makers-shapers/reports/EIT-
Digital-Data-Sovereignty-Summary-
Report.pdf

EIT (2025)

https://www.eitdigital.eu/fileadmin/2024/e
cosystem/downloads/EIT-
Digital_AiNed_Generative-AI-Report-
web.pdf

1 👍 **Human Agency and Oversight**

2 👍 **Transparency**

3 👍 **Diversity, non-Discrimination and Fairness**

4 👍 **Societal and Environmental Wellbeing**

5 👍 **Privacy and Data Governance**

6 👍 **Technical Robustness and Safety**

7 👍 **Accountability**

European Commission

Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for Educators

Correlated documents: High Level Expert Group on Trustworthy AI (2019), DigCXomp 2.2. (2022) EU AI Act (2024
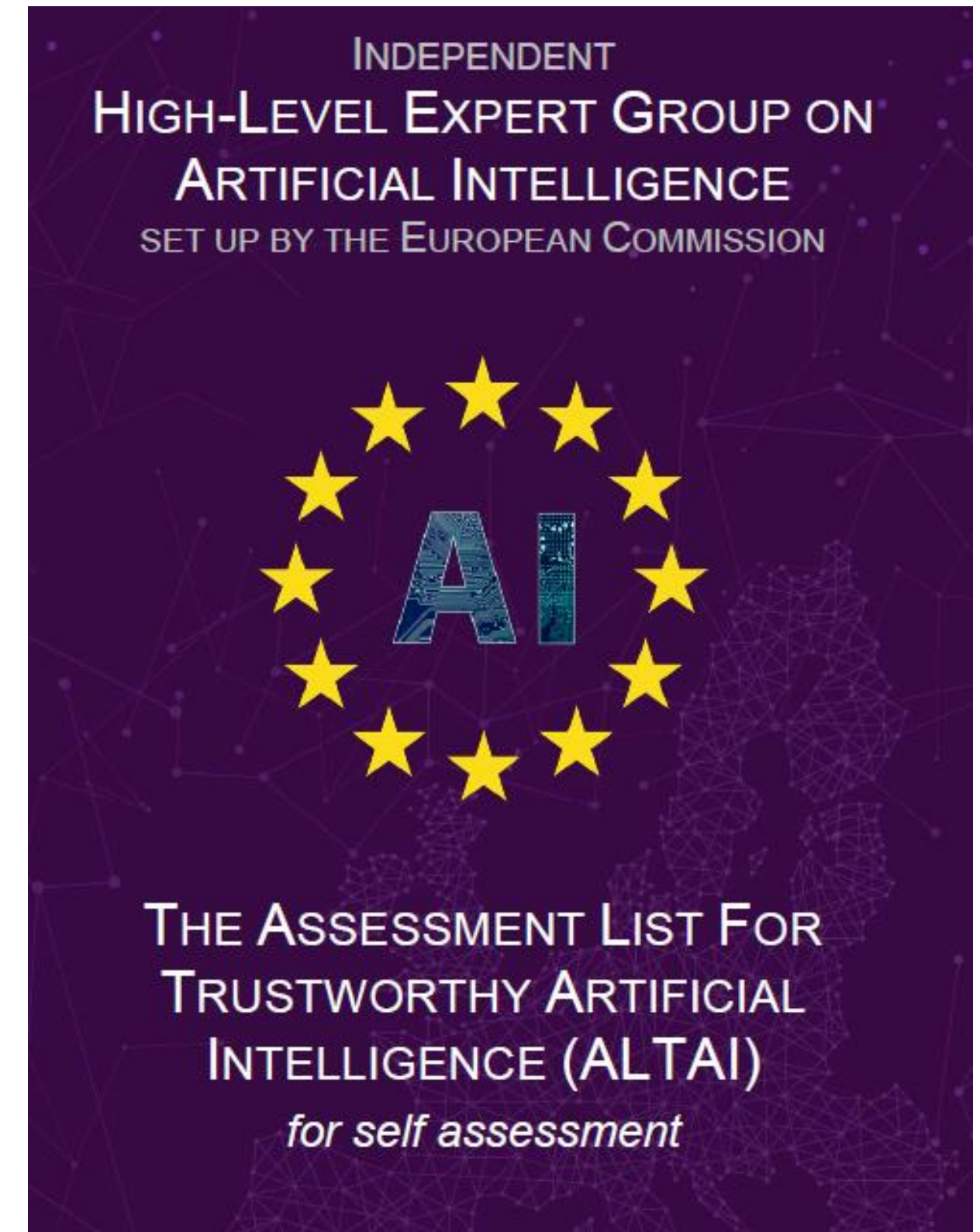
Ethics in the UE discourse

2019

- Human Agency & Oversight
- Technical Robustness and Safety
- Privacy & Data Governance
- Transparency
- Diversity,   non-discrimination & Fairness
- Societal & Environmental Well-Being
- Accountability

2020

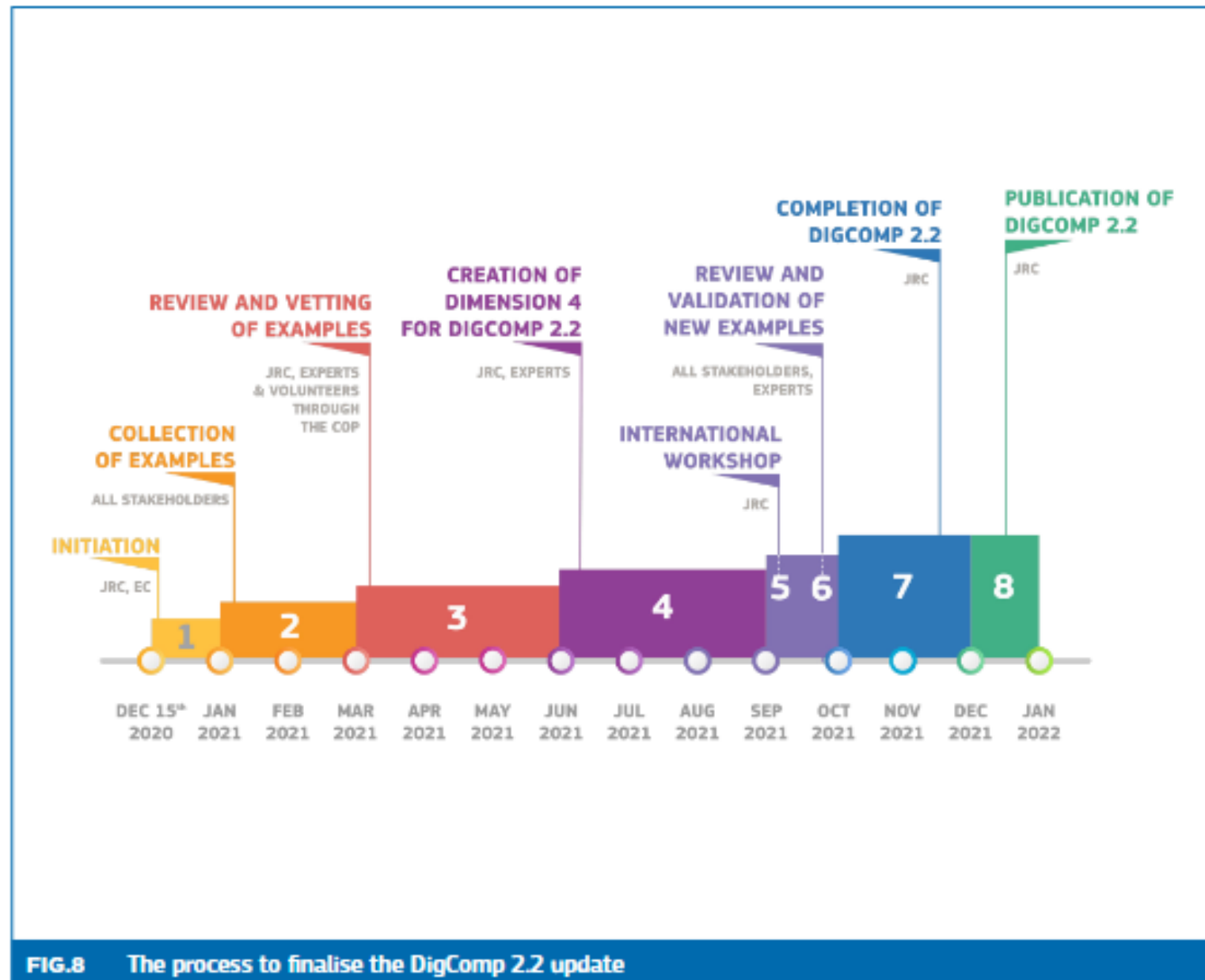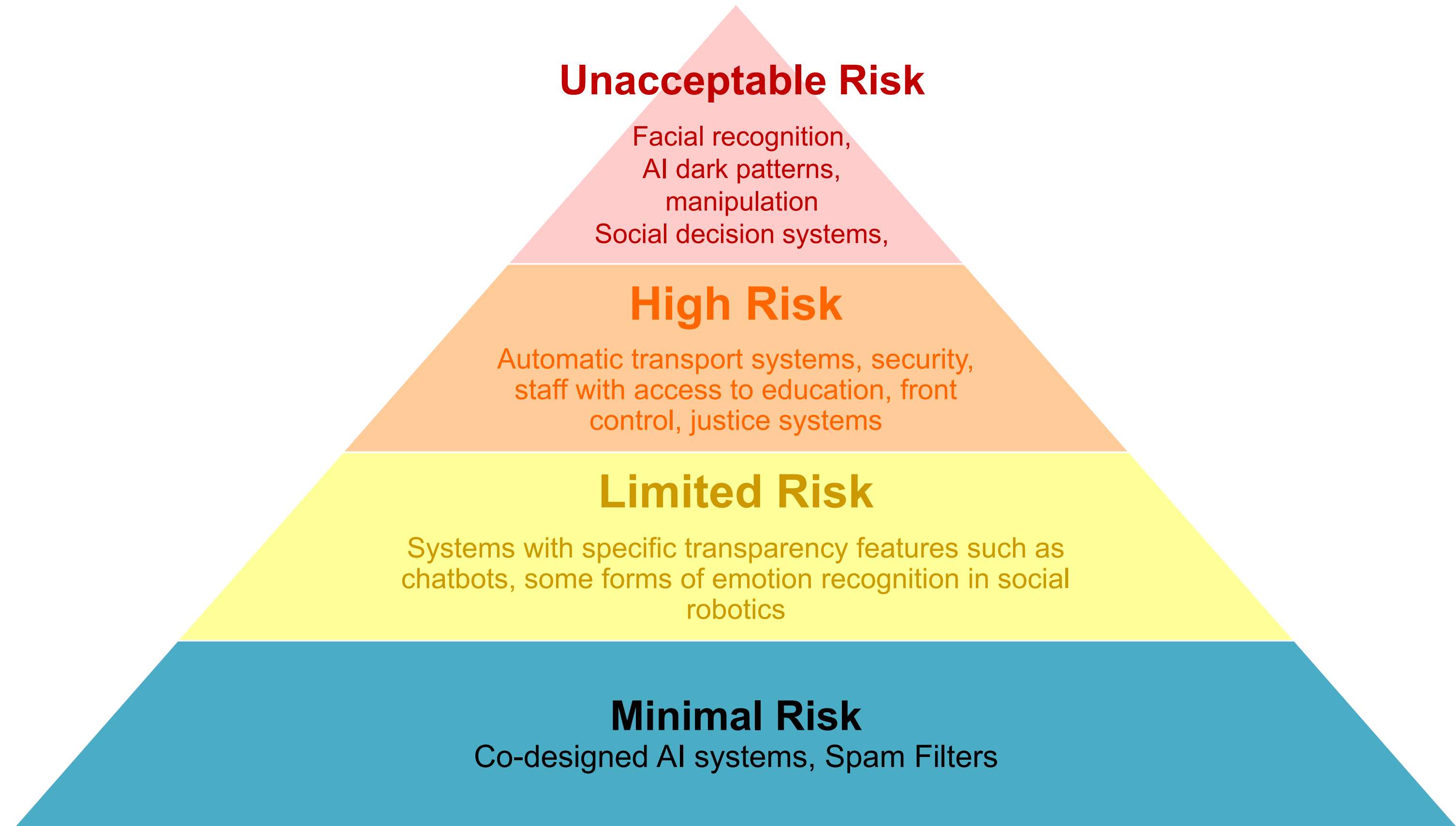- White book on AI: An European approach for Excellence and Trust

FIG.8   The process to finalise the DigComp 2.2 update

Unacceptable Risk

Facial recognition,
AI dark patterns,
manipulation
Social decision systems,

High Risk

Automatic transport systems, security,
staff with access to education, front
control, justice systems

Limited Risk

Systems with specific transparency features such as
chatbots, some forms of emotion recognition in social
robotics

Minimal Risk
Co-designed AI systems, Spam Filters

Main AI regulation in Europe

# What's the problem with universal recommendations?

- Universal guidelines vs...
  - The dilemmas of situated human activity
  - Open contradiction (e.g.: openness or transparency vs. privacy)
  - Abstraction, elusiveness (e.g.: check for a system algorithmic biases)
- If it's not an ethics of **values** (*guidelines*) or an ethics of **consequences/impact** (*consequentialism*), shall we go for an ***ethics of virtues*** *(deontology)*?

...The educator and the problem of supererogation

Etica delle macchine
Dilemmi morali per robotica e intelligenza artificiale

Guglielmo Tamburrini
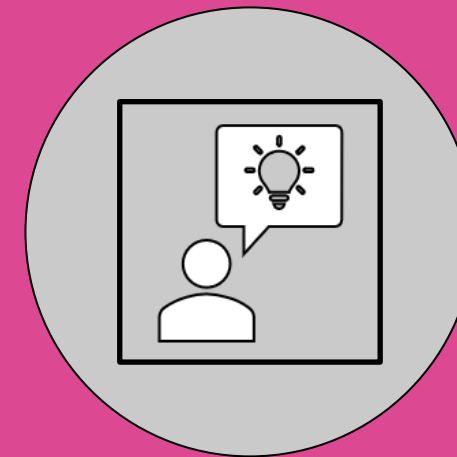
Carocci editore Quality Paperbacks

Our journey

Anchoring the ethics of educational technology (AI and data) usage in the Education Practice

ETHTECH
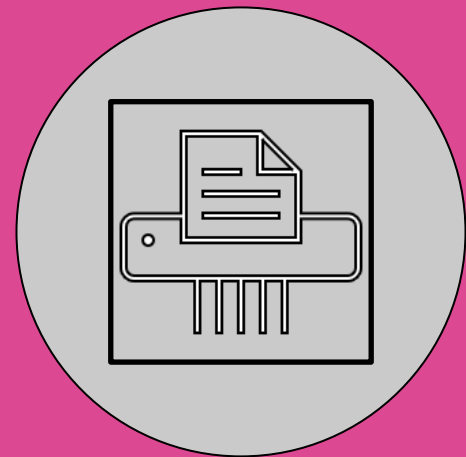
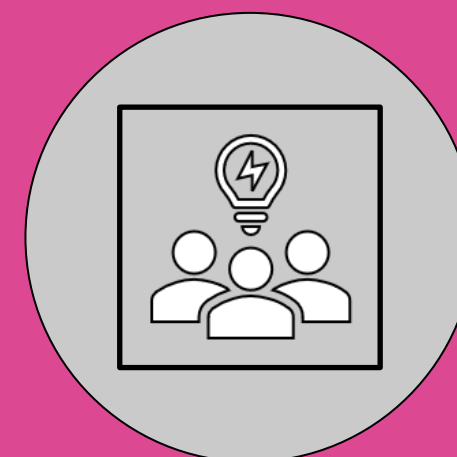Discourse analysis of **3204** EU Erasmus+ projects on educational technology

Syllabi analysis **(initially 150 syllabi)**: educational technology courses delivered within pre-service teachers' training in Spain, Italy, Romania, Germany

Conceptual Brainstorming and «participatory thematic analysis» **(121 original ideas)**

Sessions **(9)** with teachers' educators / professors to rethink discourses about the ethics of educational technology

SPOILER ALERT!

Instrumental use and teaching of educational technologies - Little presence of ethics' debate - Ethics as compliance

Find more about the ETH-TECH Research Outputs

https://zenodo.org/communities/eth-tech/

Reports from the sessions

Stories – EthTech Website

Participatory Thematic Analysis*

- Initially we engaged in a common interpretation ideas shared in two sessions, re-arranging them into three main topics:

  - Problems (18 ideas);
  - Methods to approach problems (15 ideas)
  - Future desiderable scenarios (17 ideas).

Day 3: **Envisioning Ethical Futures**

The final day was dedicated to solutions. Building on their discussions, the group sketched out a framework that could move beyond static ethical principles and into dynamic, context-sensitive practices. Through our participatory brainstorming, we imagined how educators and students could engage in an ethics of inquiry.

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ETH-TECH PERSPECTIVE

The Ethical Conundrum

ETH-TECH Instruments of mediation

ETH-TECH imagined future scenarios

Planetary ruins
+
Political Power
+
Global Inequality

Ethics as a critical inquiry

Cultural and Socio-technological diversity
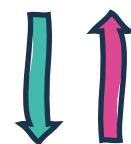
Techno-solutionism

Mediation

Critical Co-design

Contextualisation

Ethics as a practice of care

Collective Technological Sovereignty/agency

Care/Inclusion

Local value

Utopia

Social /Individual Consequences
- Addiction/dependencies
- Biases/Discrimination
- Cultural Impoverishment

Ethical Solutionism
Individualisation of Responsibility

Future Imagination
Values/Discourses/Praxis

Ethics of care
Responsibility as a collective construction with an individual contribution

Educators' BILDUNG (not «training»)

Syllabi analysis*

Understanding how the ethics of AI and data is crystallysed in teaching planning

FOCUS OF ANALYSIS:
- **A)** Presence of "Ethics".
- **B)** Alignment content ↔ assessment dealing with ethics (Biggs, 2003).

POPULATION & SAMPLING STRATEGY:
- **Target:** syllabi on educational technologies (teacher/educator education).
- **Stratification criteria:**
1. Public vs. private institutions.
2. Presence of education science/pedagogy degrees or units.
3. Regional diversity (high vs. low GDP regions).

CORPUS ANALYSIS:
- **Qualitative text analysis (per partner)**
- **Some Common Keywords:**
1. Core themes: ethics, data ethics, AI ethics, data justice, technological sovereignty/divide, accessibility.
2. Operational terms: robust*, transparency, black box.
3. Pedagogical concepts: critical thinking.

Syllabi analysis

Understanding how the ethics of AI and data is crystallysed in teaching planning

GERMANY

- 422 universities - 2 teacher training/general education courses per federal state → **final sample: 32 universities**
- courses relevant for ETH-TECH (syllabi mentioning technology, digitization, media) → final sample: **9 courses from 9 universities**
- Courses coded per project guidelines - **Module handbooks (29–144 pages)** analyzed using keyword list

ROMANIA

- 56 universities – **final sample selection: 8 universities.**
- Courses relevant for ETH-TECH: "Computer-assisted instruction" (mandatory curriculum for teacher trainig decided by the Ministry of Education) – **final sample: 12 courses from 8 universities.**
- Each syllabus read; general themes identified – **qualitative analysis.**

ITALY

- 89 universities (60 public, 29 private; 11 private offer fully online programs) - sample selection: 30% → **final sample: 35 universities**
- courses related to educational technology in education degrees (lifelong learning trainers, teachers, educators, other educational professions) → final sample: **77 syllabi**
- Each syllabus read; keywords and general themes identified → **qualitative and quantitative analysis**

SPAIN

- 91 universities (65 including undergraduate degrees in educacion-related fields) – **final sample selection: 38 universities.**
- Syllabi mainly related to Primary and Early Childhood Education (primarily mandatory courses) – **36 syllabi identified.**
- Each syllabus read and analyzed; general themes identified – **qualitative analysis (emerging topics).**

SOME **RESULTS**

Syllabi Analysis: Preliminary Results		
Country/Sample	**Methodological Approach**	**Main Findings**
Germany 9 Documents* *Handbooks	Theoretical sampling Coverage of main geopolitical areas in the country Qualitative/Thematic Analysis	• Highest presence of media education, digitization effects and technology's impact (digitalization reshaping society). • Strong emphasis on promoting competences in media pedagogy and to teach responsible use. • Critical-reflective or ethical perspectives less prominent. • Terminological ambiguity (e.g., "media literacy" can be practical or reflective-critical)
Italy 77 documents	Stratified Quantitative sampling Coverage of main geopolitical areas in the country Quantitative Analysis General qualitative discourse analysis	• Focus is on practical application and inclusion, especially for learners with special needs. • Virtual environments' design and implementation, class orchestration with EdTech is the most represented element. • Ethics rarely integrated in educational technology content, but it appears as a full subject in the degrees.
Romania 12 documents	Theoretical sampling Coverage of main geopolitical areas in the country General qualitative discourse analysis	• Ethics included only as "professional deontology". • Strong focus on technical use of digital tools. • Ethical discourse in digital contexts is minimal and implicit.
Spain 36 documents	Stratified Quantitative sampling Coverage of main geopolitical areas in the country Quantitative Analysis General qualitative discourse analysis.	• Predominantly practical and pedagogical approaches to tech. • A few syllabi explore media literacy and critical thinking. • Ethics and digital responsibility mentioned occasionally, not systematically. • Keywords include gamification, digital identity, but ethical perspectives are rare.

Syllabi analysis
Understanding how the ethics of AI and data is crystallysed in teaching planning

Our ARS experiences*

We conducted two experiences in the four countries

1
- Teachers and educators's perspective
- Teaching plans and Syllabi of Ed university degrees in
- UE ethical guidelines, analysis and debate

A transformative approach!

EXPERIENCE ON AI – OPINION ON AI IN PRACTICE – EMOTIONS ABOUT AI
CONTEXTUALIZATION OF AI – FUTURES' IMAGINATION

2
- University students of degrees linked with education
- Teaching and learning practices and case studies
- UE ethical guidelines, analysis and debate

* Presentation by Blanco-Navarro, Raffaghelli et al. (2025)

Findings from the Academic Teachers' Group

Country	Main Ethical Guidelines Selected	Key Concerns	Potential Future Actions	Hardest Dimension to Integrate
Germany	Human agency and oversight Transparency	Discrepancy between handbooks and practices Need for top-down curriculum reform	Bridge gap between handbooks and practices Examine university approaches to enable AI ethics integration	Accountability and Technical robustness and safety
Spain	Accountability seen as most difficult	Disconnect between frameworks and practice Lack of AI system transparency Politics of proprietary tech adoption	Institutional support Teacher training Participatory governance for addressing AI ethics	Accountability
Italy	Transparency Privacy and Data Governance	Lack of digital ethics in curricula Divide between admin needs and pedagogy Lack of critical tech pedagogy in teacher training	Curriculum redesign Case studies/scenarios Interdisciplinary collaboration Contextualized approaches for critical reflection	Accountability Technical Robustness and Security
Romania	Human Agency and Oversight easiest to integrate	Student overreliance on AI Lack of transparency in AI usage Linguistic barriers Unequal access to tech	Guidance for interpreting AI outputs Open discussions on responsible AI use Promote 'data hygiene' Inclusive learning environments	Privacy and Data Governance

Findings from the students' groups

Country	Setting & Participants	Most Impactful Cases	Emotional Climate	Vision of Ethical Practice
Germany	Embedded in a BA course on AI's societal implications (17 students, Helmut-Schmidt-University Hamburg)	Case F (emotional data tracking), Case D (peer-led AI use without teacher awareness)	Optimistic tone; enthusiasm and hopefulness; concern over surveillance and accountability	Emphasis on human oversight, teacher mediation; EU guidelines seen as helpful but too superficial; questioned who is accountable when AI goes wrong
Romania	Three sessions with 42 psychology and education science students (Babeș-Bolyai University)	AI-supported learning, automated grading, student profiling, bias in facial recognition and stereotypes	Gratitude, concern, worry about cognitive erosion; strong critical engagement with dilemmas	Personalized, transparent, and guided AI use; need for informed consent, fairness, privacy, and human oversight; education must resist data-driven reductionism
Italy	Two sessions (face-to-face and hybrid) with 23 educators and students (University of Padua)	Case D (ChatGPT use in coursework with tacit teacher approval)	Negative emotions: guilt, anxiety, bitterness; recognition of simulated learning and teacher disengagement	Advocated for co-responsibility, dialogic agreements, and transparency; ethics must be participatory, grounded in teacher-student relations; EU guidelines criticized as context-poor
Spain	Workshop within Master's practicum for 18 future teachers (University of Barcelona)	Automated grading, facial recognition, profiling of minors	Fascination, gratitude, discomfort, mistrust; highlighted lived tension between reliance on AI and institutional silence	Emphasized pedagogically contextualized, inclusive AI; called for transparency, equity, institutional support; ethics must be embedded in pedagogy, not external rules

Principal findings

- Values like technological diversity, collective agency, planetary care and truly "good" pedagogical technologies not expressed in the syllabi.
- reliance on proprietary software*
- lack of teacher training on both technical and ethical aspects of AI
- institutional pressures to adopt digital tools under a poorly defined notion of innovation

Examples: plagiarism detection tools, accessibility for students with disabilities, ChatGPT.

Potencial actions to addressed them

- Reframe ethics as a situated educational practices, entangled with global politics, local pedagogies, and lived experiences of teachers and learners.
- Shifted from "concern" to "occupation".
- Institutional commitment, training, and resource allocation to support this integration.
- Time and special spaces to think individually and collectively.
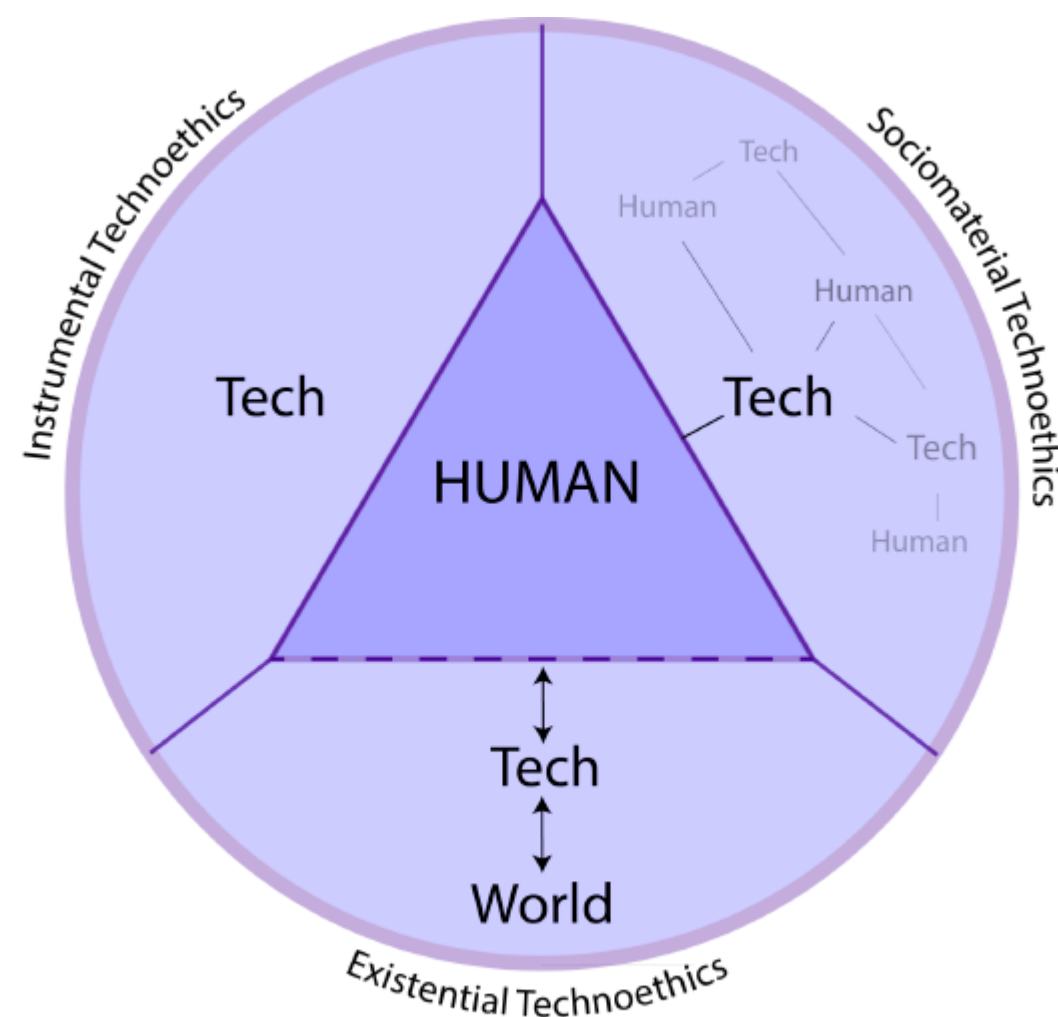
Furthering the discusión...

Figure 1. TechnoEthics for Teachers Framework (TEFT)

Adams & Groten, 2023

Murillo et al., 2023

(Cites articles including syllabi analysis pointing out the lack of ethical training in many professions)

Not supererogation, but responsibility & care

OXFORD

EPISTEMIC INJUSTICE
Power & the Ethics of Knowing

MIRANDA FRICKER

Nussbaum's interpretation of Aristotle is helpful on this score:

[Aristotle] holds that the truly good person will not only act well but also feel the appropriate emotions about what he or she chooses. ...

wisest person remains open to surprises. Or, rather, the fact that she is open-hearted enough to resist the dishonest safety of fixed moral understandings *is* the crowning mark of her moral wisdom. This is what Iris Murdoch means when she says: 'Moral tasks are characteristically endless not only because "within", as it were, a given concept our efforts are imperfect, but also because as we move and as we look our concepts themselves are changing
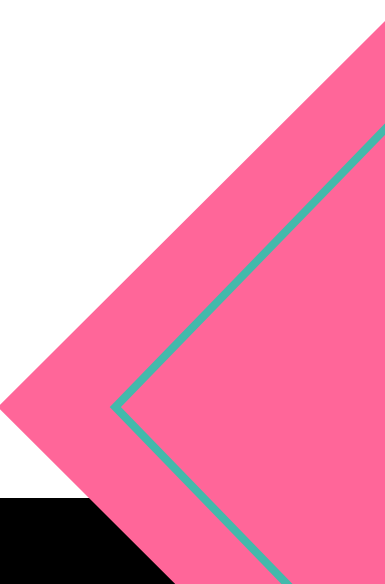
Fricker, 2007, p.89 and p.85

Cited texts:

Murdoch, I. (1970, p.28= 'The Idea of Perfection' in The Sovereignty of Good, Routledge.

Nussbaum, M. (2003) Upheavals of Thought: The Intelligence of the Emotions, Cambridge UP

Searching for a dynamic balance in different contexts (Zilio, 2025)

Ethics does not belong to the machine

Points to discuss (place to the center of our educational intervention):

- How can we deal with the centrality of teachers and learners' ethics as a PRACTICE, POLITICS AND AGENCY where…
- **…CARE for the other is key (the responsible action towards the other and the environment, considering a non-banality of our actions, beyond norms and correct procedures)?**
- BUT…
- **…Is care teachable/learnable?**
- **…Which are the limits of our professional intervention as educators?**

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