



The European Commission and AI: Guidelines, Acts and Plans Impacting the Teaching Of AI and Teaching With AI

Keith Quille
Technological University Dublin
Ireland
keith.quille@tudublin.ie

Brett A. Becker
University College Dublin
Ireland
brett.becker@ucd.ie

Lidia Vidal-Meliá
Jaume I University
Spain
lvidal@uji.es

ABSTRACT

Recent developments, guidelines, and acts by the European Commission have started to frame policy for AI and related areas such as ML and data, not only for the broader community, but in the context of education specifically. This poster presents a succinct overview of these developments. Specifically, we look to bring together all publications that might impact the teaching of AI (for example, teacher expectations in the coming years around AI competencies) and publications that affect the use of AI in the classroom. We mean using tools and systems that incorporate both ‘Good Old Fashioned’ AI and those that can directly impact students. This poster is of value to both the European and the wider CER communities and practitioners, as it brings together several guidelines, acts, and plans that are not easily searchable or linked. The publications presented in this poster will impact the teaching of AI and teaching with AI in Europe, and insights can be drawn and compared for other jurisdictions as the educational world adapts to and with AI.

1 MOTIVATION

There have been several significant recent publications by the European Commission (EC) concerning the teaching of AI and the use of AI, mainly for the K-12 classroom, but also applicable to thrid-level. These take several forms including Guidelines, Acts, and Plans, each with different roles and goals. Some are focused on AI, while others include sections on AI. These documents can be difficult to find as the current platform does not have sufficient search features, e.g. to query if AI is a core part of a publication or a mere passing comment. This is more difficult if one is unfamiliar with the platform. This poster aims to highlight the impact these policies and actions have on the teaching of AI and teaching with AI. The poster itself will also provide an info-graphic highlighting the relationships between the publications, not only to each other, but also how these will impact teaching of AI and its use in the classroom.

2 OVERVIEW OF PUBLICATIONS:

The most recent significant policy development was a set of deliverables from the High Level Expert Group (HLEG) on AI.¹ The first

¹<https://digital-strategy.ec.europa.eu/en/policies/expert-group-ai>

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the owner/author(s).

SIGCSE 2023, March 15–18, 2023, Toronto, ON, Canada

© 2023 Copyright held by the owner/author(s).

ACM ISBN 978-1-4503-9433-8/23/03.

<https://doi.org/10.1145/3545947.3576353>

of these deliverables, published in draft in December 2018, was the *Ethics Guidelines for Trustworthy AI*.² These guidelines are centered around the core concepts that AI should be ethical, lawful, and robust. In addition to key requirements, the AI HLEG developed the Assessment List for Trustworthy Artificial Intelligence (ALTAI)³ which allows for the self-assessment of guideline adherence by providers and users (teachers and students in an educational context). Following a recommendation by the AI HLEG, the European Commission (EC) proposed the development of ethical guidelines on AI and data in education and training in 2019, which is wholly focused on education. This group concluded its work in June 2022, and was published in October 2022⁴. With the Ethics Guidelines for Trustworthy AI and the ALTAI assessment published, the EC decided to develop an *Artificial Intelligence Act* that would ensure more compliance than guidelines – while acknowledging the value of the guidelines and the foundation that they laid. The current proposal was last published in April 2022⁵. Education is discussed in several places in the proposal and, most notably, is categorised as high risk, where students’ fundamental rights are a core concern.

Two significant policy documents that impact both teachers and students are the Digital Education Action Plan (DEAP) 2021-2027^{6,7} and the closely-linked *DigComp 2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills, and attitudes*.⁸ The DEAP presents a common vision for “high-quality, inclusive and accessible digital education in Europe, and aims to support the adaptation of the education and training systems of EU Member States to the digital age”. This version lists priorities for the EC and EU in challenges such as COVID-19 and AI. DigComp 2.2 is a general competency framework for all citizens, and involves education specifically. It defines competencies as a set of skills, knowledge, and attitudes. The framework ties closely to the DEAP 2021-2027 policy document, and lists Artificial Intelligence as an emerging competence requirement, specifically under the area of “citizens interacting with AI systems”.

As EU policy such as the General Data Protection Regulation (GDPR) often quickly influence policy outside the EU we aim for this poster to be an informative and time-saving resource not just for those in the EU, but educators in many jurisdictions.

²<https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>

³<https://digital-strategy.ec.europa.eu/en/library/assessment-list-trustworthy-artificial-intelligence-altai-self-assessment>

⁴<https://education.ec.europa.eu/news/ethical-guidelines-on-the-use-of-artificial-intelligence-and-data-in-teaching-and-learning-for-educators>

⁵<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0206>

⁶<https://education.ec.europa.eu/focus-topics/digital-education/action-plan>

⁷https://education.ec.europa.eu/sites/default/files/document-library-docs/deap-communication-sept2020_en.pdf

⁸<https://publications.jrc.ec.europa.eu/repository/handle/JRC128415>