

Using Artificial Intelligence in Teaching and Learning within the EU Framework

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A Summary
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The European Union has been at the forefront of integrating artificial intelligence (AI) in various sectors, including education. This policy paper discusses the potential, challenges, and guidelines for implementing AI in teaching and learning across EU member states.

Artificial intelligence (AI) is revolutionizing the teaching and learning landscape, offering new opportunities and innovative tools. This is especially true for training activities offered to professionals in sectors needing a rapid adaptation to technical, legislative, and, more broadly, contextual changes. Professionals need to receive focused and personalized training to be able to provide efficient and effective services to their clients.

AI can support the participants of training experiences through “personalized Learning”, tailoring educational experiences to individual student needs, abilities, language, contexts, and learning styles. Intelligent Tutoring Systems are often used to achieve this goal. After analyzing data about students, such as answers to quizzes, time spent on certain materials, and other behaviors, they provide real-time feedback and assistance in a specific learning environment.

AI tools can also support teachers during the instructional design process (creating lesson plans, assessment rubrics, contents, etc.) but also during the teaching experience providing real-time stimuli, exercises, and quizzes, also making learning materials more accessible to diverse student populations.

AI tools can also enhance the efficiency of administrative tasks thus supporting the institutions in delivering different and varied educational experiences.

Finally, AI can provide educators and policymakers with valuable insights through data analysis, improving decision-making processes in educational settings.

Besides all these potentials there are several Challenges and risks to consider.

Several documents address privacy, data protection, and ethical use of AI in educational contexts.

Digital Divide is another issue: ensuring equitable access to AI technologies across different regions and socio-economic groups within the EU is fundamental to supporting equitable global development.

Another challenge resides in preparing educators to integrate AI tools in teaching methodologies effectively: this is to use AI to deliver effective learning experiences avoiding the proliferation of low-quality educational offers.

The European Union is actively working towards developing a comprehensive EU-wide regulatory framework that addresses ethical, privacy, and accessibility concerns related to the use of AI in all sectors, including education.

The [European Commission's Ethics Guidelines for Trustworthy AI](#), published on 8 April 2019, marked a significant step in this direction, emphasizing the need for AI systems to be lawful, ethical, and robust.

In April 2021, the Commission proposed the first-ever [legal framework on AI](#) (the AI Act).

In the specific terms of the educational context, the European Commission published the “[Ethical Guidelines on the Use of Artificial Intelligence \(AI\) and Data in Teaching and Learning for Teachers](#)” on 25 October 2025.

The Guidelines are part of the [Digital Education Action Plan \(2021-2027\)](#): they address how AI is used in educational contexts both to support teachers and students and administrative tasks.

To foster innovation in AI for education, the EU is also prioritizing funding and research. The [Horizon Europe program](#), for instance, is instrumental in funding research and innovation, including projects that focus on AI and education.

A unified approach is essential for the scalability of AI educational tools. The EU encourages collaboration among member states to standardize AI tools and platforms. The [European Education Area](#) initiative highlights the importance of such collaboration for enhancing the quality and inclusiveness of education throughout the EU.