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What Secondary School Teachers Should Know About Using Ai, Suggested Course Topics

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Abstract

Artificial Intelligence (AI) has rapidly emerged, and secondary school teachers play a crucial role in preparing students for a world shaped by AI, yet many educators are still seeking guidance on what knowledge and competencies are most relevant.

This paper outlines suggested course topics for teacher training in AI, drawing on recent educational frameworks, international initiatives, and practical teaching materials. Major areas of coverage should include an introduction to the history and concepts of AI, understanding machine learning, neural networks, and generative models, and education, scientific, and societal applications. Teachers should also be familiar with widely used AI tools (e.g., ChatGPT, Gemini, Claude, Copilot, Canva), their capabilities and limitations, and practical classroom uses. Ethical and societal dimensions—such as data protection, bias, transparency, and the challenges of misinformation and deepfakes—are equally critical to address.

The materials also emphasize project-based learning, interdisciplinary connections to STEM subjects, and hands-on practice modules (e.g., detecting deepfakes, comparing chatbot vs. human dialogue).

The proposed curriculum highlights also pedagogical approaches, ensuring that AI education is accessible, relevant, and aligned with future labor market needs.

The 16-hour course material and learning experience that we delivered as an intensive 3-day course throughout June 2025 will be discussed in the paper.

During the presentation, we will ask participants to fill out a short online questionnaire about the use of AI, regarding the fact that since the use of AI reduces critical thinking and decision-making, can the life experience of the older generation really compensate for this?

Keywords: Ai Education; Ai Ethics, Ai Tools; Teacher Skills; Older Generation