

# Creative Applications of Artificial Intelligence in Education

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## Context

This academic work explores **how AI can transform education**, not only as a technical tool but also as a catalyst for pedagogical innovation, creativity, and collaboration between teachers, students, and machines.

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## Main Content

### Theoretical Frameworks and Perspectives

- Discussion on the **evolution of AI in education**, its potential role, and ethical challenges.

### Practical Applications

- Concrete examples of AI used for:
  - Personalized learning.
  - Intelligent tutoring.
  - Automated assessment.
  - Teacher support.

### Creativity and Innovation

- Pedagogical approaches that use AI to **stimulate creative thinking** and problem-solving.

### Human-AI Collaboration

- Reflection on the **complementarity between teachers and AI** and the co-creation of educational experiences.

### Case Studies

- Experiments in various educational contexts:
  - Higher education.
  - Online learning.
  - Informal learning.

## Challenges and Future Perspectives

- Ethical, transparency, inclusion, and sustainability issues of AI in education.
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## Chapters Overview

### Chapter 1 – Creative Applications of Artificial Intelligence in Education

- General introduction to the role of AI in education.
- Focus on its **creative potential** beyond automation.

### Chapter 2 – Preserving Teacher and Student Agency

- Importance of maintaining the autonomy of teachers and learners.
- AI as a **support tool**, not a substitute.

### Chapter 3 – Learning Artificial Intelligence Through Open Educational Resources

- Use of **Open Educational Resources (OER)** to learn and disseminate AI skills.
- Emphasis on accessibility and knowledge sharing.

### Chapter 4 – Digital Acculturation in the Era of Artificial Intelligence

- Cultural and social challenges of integrating AI in education.
- Preparing students to **understand the societal impact** of AI.

### Chapter 5 – Citizenship, Censorship, and Democracy in the Age of Artificial Intelligence

- Citizen and democratic implications of AI.
- Developing **critical thinking** to resist misinformation, bias, and technological censorship.

### Chapter 6 – International Initiatives and Regional Ecosystems

- Exploration of **global and regional initiatives** to promote AI in education.
- Need for global cooperation adapted to local specificities.

### Chapter 7 – Informal Education Practices for Human–AI Creative Pedagogy

- Informal education practices:
  - Creative workshops.
  - Gaming.
  - Co-design.
- Strengthening **creativity and collaborative learning**.

## **Chapter 8 – Students’ Perspective on the Use of Artificial Intelligence in Education**

- Student perceptions of AI:
  - Promising tool but also concerns about **technological dependence, privacy, and equity**.

## **Chapter 9 – Affordances for AI-Enhanced Digital Game-Based Learning**

- Potential of AI in **game-based learning**:
  - Adaptive gaming experiences.
  - Personalized scenarios.
  - More engaging learning.

## **Chapter 10 – Generative Artificial Intelligence in Higher Education**

- Rise of generative AI (e.g., ChatGPT) in higher education.
- Uses (writing assistance, creativity, research) and risks:
  - Plagiarism.
  - Loss of critical thinking.
  - Standardization.

## **Chapter 11 – Artificial Intelligence in Professional and Vocational Training**

- Use of AI in professional and technical training:
  - Intelligent simulators.
  - Skills analysis.
  - Adaptation to labor market needs.

## **Chapter 12 – Manifesto in Defence of Human-Centred Education**

- A manifesto advocating for **human-centered education**.
- Ethical, inclusive, and sustainable use of AI to preserve fundamental educational values.