Artificial Intelligence in Higher Education: Application, Challenges and Risk

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Introduction

The present research is intended to explore the role of Artificial Intelligence (AI) in Higher Education, including its meaning and implications, with a particular emphasis on how this innovation can influence the processes of guidance and human learning. Although the exceptional opportunities that AI can offer in support of teaching and learning are expanding, its widespread adoption seems to be still distant, due to multiple risks and ethical, legal, and social implications that have so far exceeded political debates and regulatory frameworks. Analyzing the influence that AI is having and will have in Higher Education, through a literature review, has been important both for identifying its potential to address many open issues and because it has provided an extended view of the current world, also allowing us to envision future research directionsany open issues and because it has provided an extended view of the current world, also allowing us to envision future research directions.

Methodology

Method

Narrative Literature review

Keywords

"Artificial Intelligence"; "Higher Education"; "Adult Education"; "Guidance"; "Lifelong learning"; "Active Ageing", combined with the boolean operator "AND".

Database

- *Web of Science*
- *ERIC*
- *Scopus*

Criteria of inclusion

- Availability of full text
- Publications in open access
- Publication date (from 2013 to 2023)
- English language
- Document type (scientific articles)
- Sample (teachers/students/adults)
- Topics (Connection between Artificial Intelligence and Higher Education; Perception of teachers and students regarding the innovation provided by AI in teaching, learning, and guidance activities; Digital and technological transformations; Ethical risks generated by the use of AI; Educational policies and strategies).

Selection of Studies

Phase 1: Preliminary assessment of studies based on titles and abstracts to exclude those that are not relevant or do not conform to the established inclusion criteria
Phase 2: Exploratory reading of the selected articles to determine their relevance and appropriateness with respect to the research objectives.

Aims

1) Exploring the current level of adoption of AI in Higher Education and its impact on the guidance and learning processes.
2) Identifying the key educational challenges associated with the implementation of AI in Higher Education.

Results

The Literature review has shown that:
- The use of AI in Higher Education will transform guidance, teaching and learning, offering potential benefits.
- AI will transform teaching but cannot replace teachers.
- The implementation of AI in Higher Education is still limited and not widespread across all contexts or institutions, due to various limitations.

The analysis has allowed us to identify six major educational challenges related to AI in Higher Education that encourage an interdisciplinary perspective on future research.

Potential	Limitations
Stimulating and personalized guidance and learning	Privacy and personal data protections
Automation of administrative tasks	Transparency and Accountability
Helps identify university students at risk of dropping out	Improper use of AI technology and Reduction in social interaction
Reduces the workload	Usability and Acceptability issues
Helps to speed up the processes	Limited financial resources

- Artificial Intelligence Literacy
- Big Data Supervision
- Policies and Ethical Principles
- Learning 21st Century Skills
- Lifelong and Lifewide Learning
- Promoting Active ageing

References

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