

Adult Learners' Perceptions of Artificial Intelligence: Affordances and Concerns

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Introduction

Background

- One-third of jobs are susceptible to AI-driven transformation (OECD, 2025).
- Adult learners, especially those who are not “digital natives”, need AI readiness to keep pace (Laupichler et al., 2022).

The research gap

- AI competency research focuses largely on compulsory and higher education (Laupichler et al., 2022).
- Effective AI training requires understanding how adult learners themselves perceive AI (Long & Magerko, 2020).

The purpose of the study

To explore how adult learners perceive AI, focusing on its affordances and concerns.

Research Methods

Participants (N = 547)

- A Center for Adult Education in Flanders, Belgium
- Age 18-81 years (M = 48.2, SD = 16.3)
- 60.5% female, 39.3% male
- 50.8% held a master's degree
- 56% taught with AI tools

Data Collection

- Anonymous online questionnaire with informed consent
- Two open-ended questions on the positive and negative aspects of AI
- Responses accepted in Dutch or English

Data Analysis

- 1094 responses (coding in MAXQDA)
- Open coding (55 codes)
- Axial coding (thematic framework)
- Co-author review; consensus via discussion

Results

Affordances

Technical strength

- Rapid access
- User-friendly
- Low cost
- Accuracy

Learning enhancement

- Language learning
- Personalization
- Instant feedback
- Cognitive development
- Emotional support
- Training support

Work efficiency

- Time saving
- Effort reduction
- Task automation
- Productivity boost
- Data processing
- Problem-solving

Creative application

- Brainstorming
- Specialized fields
- Content creation
- Communication
- Fighting against danger

VS.

Concerns

Technical weakness

- Inaccuracy
- Hallucination
- Complexity
- Low quality
- Excessive automation
- Inherent limitation
- Expensive

Cognition erosion

- Laziness
- Over-reliance
- Loss of creativity
- Reduced thinking skill
- Cheating
- Cognitive overload
- Lack of preparation
- Learning deficit

Loss of humanism

- Social isolation
- Lack of nuance
- Educational integrity
- Exploitative labor
- Loss of human intelligence

Ethical concern

- Data privacy
- Lack of transparency
- Bias
- Copyright violation
- Accountability gap
- Lack of regulation

Societal threats

- Job displacement
- Loss of control
- Environmental impact
- Misuse
- Inequality
- Security risk

Discussion

1. Adult learners hold dual views in which utility and apprehension coexist. This finding echoes the results of Chan and Hu (2023) with university students and Celik (2022) with teachers.
2. Positive perceptions are instrumental, foregrounding efficiency, accessibility, and personalized support, consistent with adult learners' goal-oriented engagement (Storey & Wagner, 2024).
3. Negative perceptions reach beyond technical limits into ethical, civic, and ecological terrain, echoing critical perspectives on AI in education (Bearman et al., 2023; UNESCO, 2023).

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