

EDCI 339: Online Learning Project

The Role of AI in Adaptive Learning

SlidesCorner

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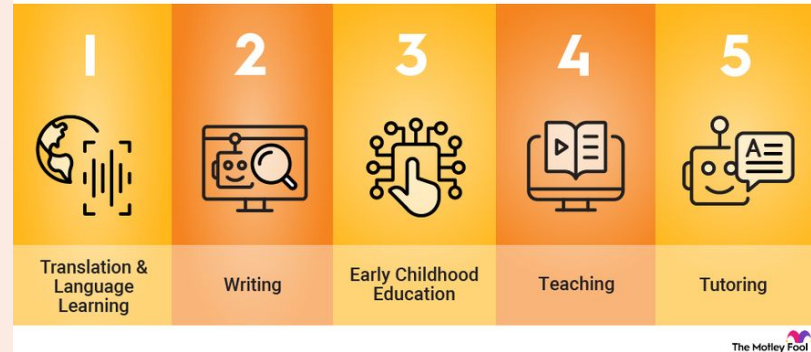
Inquiry Question:

How does personalized, AI-driven content enhance teaching and learning in online education?

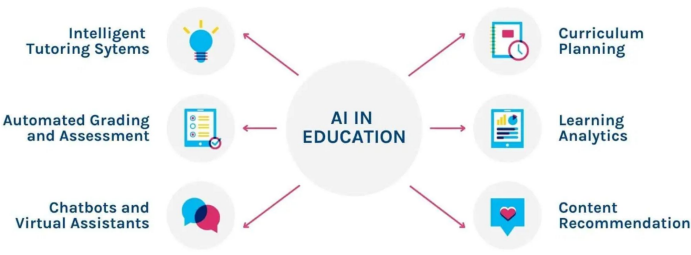
Why This Inquiry Matters:

As online and distributed learning environments grow, AI plays a transformative role in tailoring content, supporting learner diversity, and personalizing instruction.

EXAMPLES OF AI IN EDUCATION



Benefits of AI in Personalized Learning



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Learning AI vs Traditional Learning

Exploring the Future of Education

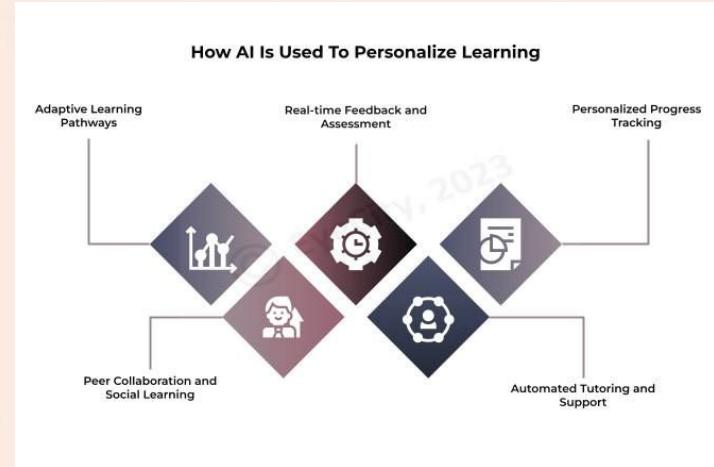
Learning with AI	VS	Traditional Learning
Core Approach: Adaptive and Personalized Learning. AI-driven learning tailors educational content to individual students' needs, adapting in real-time based on their performance and learning style.		Core Approach: Standardized Curriculum and Instruction. Traditional learning follows a standardized curriculum, with uniform instruction provided to all students regardless of individual differences.
Personalization: High Degree of Personalization. AI systems can analyze students' strengths and weaknesses, providing personalized recommendations and exercises that target specific areas for improvement.		Personalization: Limited Personalization. Personalization in traditional learning often depends on the teacher's ability to recognize and address individual needs, which can be challenging in larger classrooms.
Accessibility: On-Demand Learning Anytime, Anywhere. AI-powered platforms offer flexibility, allowing students to learn at their own pace, anytime, and anywhere, often through mobile devices or online platforms.		Accessibility: Fixed Schedules and Physical Classrooms. Traditional learning typically requires students to adhere to fixed schedules and attend physical classrooms, limiting flexibility and accessibility.

Relationship to Teaching & Learning

- **Tailored Learning Experiences:**
AI customizes content based on student progress, pace, and preferences—ensuring challenge without overwhelm.
- **Real-Time Feedback & Assessment:**
Instant feedback helps students reflect, revise, and stay on track—while also alerting instructors to learning gaps.
- **Enhanced Student Engagement:**
Through gamified elements and multimedia content, AI keeps learners motivated and active.
- **Support for Educators:**
AI reveals patterns in student performance, helping instructors redesign content, differentiate support, and intervene earlier.

How AI Personalizes Learning

- **Analysis & Data Collection:**
 - All data is gathered by AI, such as engagement patterns, student behaviour etc.
- **Profiling:**
 - Learning profiles, preferences and knowledge can all be tailored for a real-time profile.
- **Content Adaptation:**
 - AI can recommended resources, revisits different concepts, and can personalize resources for more of a understanding.



The Future of AI Learning

- **Emotion in AI:**

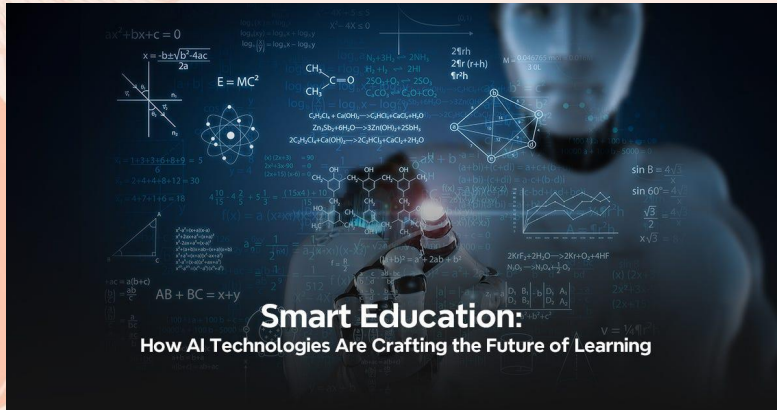
- In the future, there could be a possibility that boredom/frustration could be detected and adjusted for the learner.

- **AI Collaboration Tutors:**

- Peer review and discussions could be held by Virtual AI tutors or peers

- **Trend in AI:**

- The AI education market is expected to continuously grow and improve between the 2025-2034



References

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