

AI & Privacy

Or How I Learned to Stop
Worrying and Love Our Robot
Overlords

SESSION MODERATOR:



Amelia Vance

Public Interest Privacy Center

SESSION PRESENTERS



Libbi Nelson

California IT in
Education
(CITE)



John Lyman

Utah State
Board of
Education
(USBE)



Jim Siegl

Future of
Privacy Forum



Sara Kloeck

Software
Information
Industry
Association
(SIIA)

Spectrum of AI in schools

ARTIFICIAL INTELLIGENCE IN EDUCATION: KEY CONCEPTS AND USES

Artificial Intelligence (AI) encompasses a broad range of technologies designed to emulate human intelligence. These technologies include reasoning, pattern recognition, and learning from experience. The integration of AI into education has garnered significant attention, beginning with Machine Learning (ML) and more recently with the rise of Large Language Models (LLM) and Generative AI (GEN). These AI-based systems can "learn," improving their processing over time based on past outcomes with minimal human intervention. Although ML, LLM, and GEN are transforming education by personalizing learning experiences and automating administrative tasks, AI is not limited to these models. It spans various other concepts, each contributing uniquely to enhancing human capabilities in the completion of specific tasks. As educators embrace AI-enabled technologies, understanding the main types of AI and how they interrelate is crucial. AI and other emerging technologies are continually transforming education. By situating AI within the broader context of human knowledge and development, we can explore its evolution, future possibilities, and constraints in schools.



PREDICTIVE VS GENERATIVE

PREDICTIVE
Predictive AI uses algorithms to identify patterns and forecast outcomes based on historical and real-time data. By identifying patterns in large datasets, predictive AI models enable educators to make accurate, informed predictions on various scenarios, ranging from school business operations to student outcomes.

GENERATIVE
Generative AI creates new content, such as text, images, audio, or other data, by learning patterns from existing data. Unlike traditional AI models that are focused on classification or prediction, generative AI models can generate novel outputs that resemble the data they were trained on.

AI USE CASES AND CONTEXTS

DETERMINING EDUCATIONAL CONTEXT

AI tools can be used for a variety of applications. Careful consideration should be given to the specific use case, if confidential data is being collected or inputted, and what data is expected or intended to be produced.

When generative AI is used, additional consideration should be given to if any confidential information has been or will be used to train the model, if data inputs may be incorporated into training data, and if you can explain how the tool produces the resulting information.

AUTOMATED GRADING AND FEEDBACK

Systems can grade multiple-choice tests and essays, providing detailed feedback on student performance.

Value of AI: Reduces the time teachers spend on grading, allowing them to focus on instruction and student support. May aid with consistency and objectivity in grading. Tools should be designed to comply with student privacy laws and output reviewed by the teacher for risk of bias.

Types of AI:



STUDENT MONITORING

Integrated systems assist schools in monitoring students' network and device activity to proactively detect threats to student safety, comply with state and federal regulations, respond to community concerns, and identify at-risk students. This includes monitoring activity on school-issued devices, accounts, and district internet connections.

Value of AI: These systems analyze the student data for indicators that the system has determined may be concerning, with some systems flagging content for human review.

Types of AI:



CURRICULUM DEVELOPMENT

These systems analyze educational trends and outcomes to help educators design effective curricula to meet current educational standards and student needs. They can generate educational content such as quizzes, worksheets, and reading materials tailored to the curriculum.

Value of AI: Provides a resource to help ensure that the curriculum is relevant, up-to-date, and effective in achieving educational goals.

Types of AI:



INTELLIGENT TUTORING SYSTEMS

AI-powered tutors can offer one-on-one tutoring sessions, provide tailored explanations, answer questions, and create practice problems. They can analyze student data to create customized learning plans, explanations, and study materials tailored to individual strengths, weaknesses, and learning styles.

Value of AI: Provides students with additional support outside of classroom hours, helping to reinforce concepts through an interactive and engaging learning experience.

Types of AI:

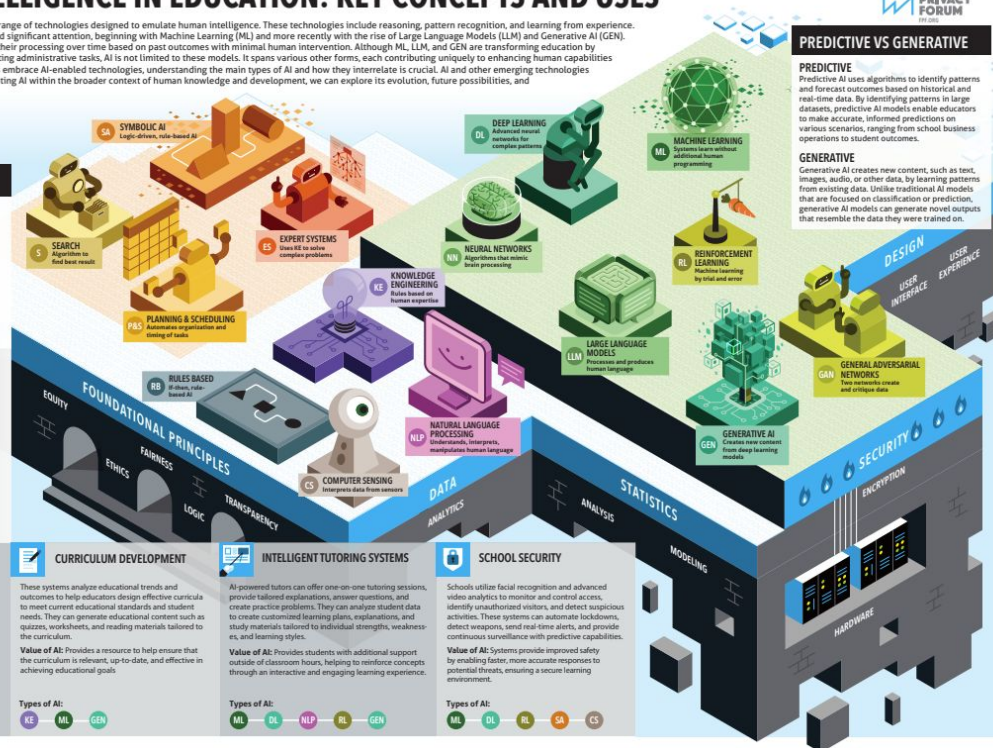


SCHOOL SECURITY

Schools utilize facial recognition and advanced video analytics to monitor and control access, identify unauthorized visitors, and detect suspicious activities. These systems can automate lockdowns, detect weapons, send real-time alerts, and provide continuous surveillance with predictive capabilities.

Value of AI: Systems provide improved safety by enabling faster, more accurate responses to potential threats, ensuring a secure learning environment.

Types of AI:



California AI Addendum

CA-NDPA Exhibit G
Version 1.5



AI Addendum

(METHODS EMPLOYED BY THE AI)

The following information correlates to how the Provider will use AI in the delivery services to LEA.

Type of AI Used	Description/Common Uses	Optional	Required
Intelligent Tutoring Systems/agents (ITS)	<i>Personalized instruction based on students' individual learning needs and progress</i>	☐	☐
Adaptive Learning/Assessment Platforms	<i>Adjusts the difficulty level and content of learning materials based on the student's performance and learning pace</i>	☐	☐
Natural Language Processing (NLP)	<i>Analyze and understand students' written or spoken responses, providing feedback or assistance in language learning tasks.</i>	☐	☐
Machine Learning-based Recommended Systems	<i>Recommend educational resources, such as books, videos, or exercises, based on students' preferences, learning styles, and performance history.</i>	☐	☐
Virtual Assistants (i.e. Alexa, Siri, Merlyn Mind)	<i>Provide automated and personalized support by handling tasks, answering questions, and managing workflows.</i>	☐	☐
Chatbots/LLMs (i.e. ChatGPT)	<i>Facilitate automated and interactive communication; provides instant responses to questions and assists with various tasks through natural language processing.</i>	☐	☐

Utah AI/Privacy Roadshow

Takeaways

- A.I. is the Trojan horse for privacy conversations with educators.
- Privacy comes at a price.
- Why is a walled garden important?
- While inputting PII is a huge point of AI instruction, cognizance of AI outputs is similarly important. PPRA (*Utah, protected topics*) violations can occur.
- What are the soft privacy skills that need to be conveyed before staff or student touch a device.

Transparency - AI Nutrition Labels

McGraw Hill

SOURCE:

<https://www.mheducation.com/highered/digital-products/ai/disclosures>

AI Nutrition Facts

McGraw Hill AI Reader

Description

AI Reader allows learners to highlight any concept in their eBook and receive AI-generated alternative explanations, simplifications, and quiz questions.

Privacy Ladder Level	1
Feature is Optional	Yes

Transparency - AI Nutrition Labels

- McGraw Hill
- Canvas

AI Nutrition Facts



Canvas Discussion Summaries

Description

Discussion summaries of key points, questions, and insights.

Model & Data

Base Model

Claude 3 Haiku

Trained with User Data

No

Data Shared with Model

Course

Discussion prompt and replies.

Privacy & Compliance

Data Retention

Data is not stored or reused by the model.

Data Logging

Logs Data

Summaries are logged in the Canvas database for review and reuse.

Regions Supported

NORAM, EMEA, APAC, LATAM

Canada is not currently supported, but will be as soon as AWS supports the required

ClassDojo AI Tools and Processing Done on Inputs	User Information Used to Provide the AI Tools (Inputs)	Output Generated*	User Types Input is Collected from and Output Disclosed to	How this Information is provided to the LLM	Retention Period / Storage / Security
Story Post Writer Helps teachers craft engaging content for ClassDojo Story updates, including AI-enhanced narrative suggestions. The AI tool suggests edits, enhances narratives, and ensures all posts are aligned with ClassDojo's and individual teacher's	–Teacher-provided text for the story post which may contain student personal information (text only, no photos) – ClassDojo - provided Prompt which will not contain any user information (e.g. "Write a post to share with parents in the ClassStory	– AI-enhanced story post suggestions ready for review and use by the teacher. This Output may contain student personal information (text only, no photos)	– Input is collected from teachers – The Output is disclosed to teachers, then once reviewed and approved by the teacher, disclosed	Text Inputs from teachers, along with any specific Prompts, are securely transmitted by ClassDojo to OpenAI for processing.	<u>Retention Period</u> Inputs and Prompts (Teacher-provided text, context, and ClassDojo provided instructions) • <u>Open AI</u> : Retained only transiently to provide the service (e.g. the active session) and for trust and safety purposes, then deleted immediately upon creation of Outputs.<u>ClassDojo</u>: Retained for usage by the teacher, to enforce our policies, improve the product or to keep our community secure. Deleted upon direction by teacher or school, or upon termination of the contract, unless we are required by law to retain.

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Any questions for the humans?

What can I help with?

Ask anything

+ Attach

 Search

 Reason

 Voice

 Help me write

 Make a plan

 Summarize text

 Surprise me

More