

AI in Education: Research Summary

MIT Media Lab • Gerlich Study • Curriculum Policy • 2024–2025

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ChatGPT launched November 2022. That is long enough for a school board to have formed a policy, piloted a program, and begun training teachers. This document summarizes key research and presents the case for a structured SFSD AI curriculum.

Nov 2022

ChatGPT launch — when SFSD should have started planning

2+ yrs

Time elapsed without a comprehensive SFSD AI policy

Now

Students are using AI daily, with or without policy

THE URGENCY

Our students are already using AI — in their homework, on their phones, every day. The question is not whether AI is in our schools. It is already there. The question is whether the district is shaping how students use it, or simply hoping the problem resolves itself.

Where is the comprehensive AI curriculum? The incumbents have had more than two years. The absence of a policy is itself a policy — and it is failing students.

KEY RESEARCH FINDINGS

Source	Key Finding	Implication for SFSD
MIT Media Lab (2024–25 preprint)	"Cognitive debt" — measurable reductions in independent thinking among students who over-rely on AI without proper scaffolding	Unguided AI use is actively harming critical thinking development
Gerlich Study (2025)	AI tool use without structured scaffolding correlates with reduced problem-solving performance	Structure and training matter; banning doesn't work
General research consensus	Students with AI literacy skills outperform peers on complex tasks over time	AI curriculum is a competitive advantage, not a threat

Educator surveys (national)	Most teachers report receiving no formal AI training; using personal judgment	Teacher training gap is the first priority
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WHAT A STRUCTURED AI CURRICULUM LOOKS LIKE

- Grade-band appropriate AI literacy standards: what AI is, how it works, its limitations
- Evaluation skills: how to verify AI output, identify hallucinations, assess sourcing
- Ethical use frameworks: academic integrity, attribution, privacy, bias recognition
- Scaffolded use protocols: when AI is a tool vs. when independent thinking is required
- Teacher training: not just how to detect AI use, but how to teach with and alongside it
- Ongoing curriculum review: AI is evolving — the curriculum must be a living document

THE IG-R CONNECTION

Stuart Willett's Innovation Grant-R (IG-R) program provides the funding mechanism to pilot and scale AI curriculum innovations without new budget line items. Teachers apply competitively for grants to pilot AI-integrated lesson plans, with results reported back to the board. Successful pilots become district-wide curriculum.

COMMITMENT

Stuart Willett's commitment: a structured AI curriculum — not a committee to study forming a committee. Policy in year one. Pilot programs via IG-R grants in year two. District-wide curriculum by year three.