

How Can AI Truly Support Educators?

What the Research Says on Generative AI's Impact on Teacher Workload

2025 | The AI & Education Studio

The Research at a Glance

Research across global educational contexts confirms that generative AI has the potential to ease teacher workload, but it does not eliminate the need for human oversight, adaptation, and professional learning.

This resource summarizes key findings from recent studies by ISTE, UC Irvine, Harvard, Wharton, MIT, and others on how AI is reshaping educator workflows and what it means for schools.

50%+

Educators Using
AI for Planning

47%

Students Concerned
About AI Accuracy

55%

Students Wanting
Human Expertise

Part 1: Curricula Directory

Top AI literacy programs actively used in US K–12 schools (1 of 2)

ISTE Whitepaper	K–12	RESEARCH
UC Irvine Study	K–12	RESEARCH
Harvard/Wharton/MIT	8–12	RESEARCH
Chegg.org Survey	K–12	SURVEY
CDT & IEEE Reports	K–12	POLICY

Part 1: Curricula Directory

Top AI literacy programs actively used in US K–12 schools (2 of 2)

Lesson Planning	K–12	BENEFIT
Formative Feedback	K–12	BENEFIT
Automated Grading	K–12	BENEFIT
Admin Tasks	K–8	BENEFIT
Oak National Aila	K–8	EXEMPLAR

The Jagged Frontier & The Bottom Line

The Jagged Frontier

A Harvard/Wharton study describes a 'jagged technological frontier' where some tasks like email drafting are significantly boosted by generative AI, while others like nuanced lesson differentiation require deep human input. This uneven benefit curve means workload relief is context-dependent.

The Bottom Line

Yes, generative AI can reduce teacher workload, especially in repetitive, low-cognitive-load tasks like initial planning and feedback. But it also introduces new tasks in oversight, adaptation, and ethics. The net effect depends on training, tool quality, and institutional support.

Navigating the New Demands

Risks and responsibilities that come with AI adoption in education

Key Considerations for Educators

ESSENTIAL PRACTICES

- 1 Review and adapt all AI-generated outputs for accuracy and cultural relevance before classroom use
- 2 Ensure curriculum alignment when using AI for lesson planning and content generation
- 3 Address equity concerns by providing equal access to AI tools and training across all schools
- 4 Develop new AI literacy and data stewardship skills for safe and ethical tool use
- 5 Protect student data privacy when implementing AI-powered platforms and analytics
- 6 Maintain human expertise as the foundation while using AI as an enhancement tool
- 7 Invest in professional development and institutional support for sustainable AI integration

High Priority

Important

Helpful

Emerging

Workload Reduction Areas

Content Creation

Benefit: AI generates lesson materials, quizzes, rubrics, and differentiated content, saving hours of preparation time.

Caveat: All AI-generated materials must be reviewed for accuracy, bias, and alignment with curriculum goals.

Feedback & Grading

Benefit: AI-assisted automated grading and formative feedback reduce turnaround time and allow more frequent responses.

Caveat: AI feedback may miss nuance, cultural context, or individual student needs that require human judgment.

Administrative Tasks

Benefit: AI streamlines email drafting, parent communication translation, and progress report generation.

Caveat: Efficiency gains can be offset by time spent learning new tools and verifying AI-generated communications.

New Demands Introduced by AI

Quality Assurance

Challenge: Teachers must review AI outputs for inaccuracies, especially in early stages of adoption when review time can offset time savings.

Strategy: Establish systematic review protocols and share best practices across teaching teams.

Equity & Access

Challenge: If only some schools or teachers can access or are trained in AI tools, it may widen the existing digital divide.

Strategy: Invest in equitable professional development and infrastructure to ensure all educators benefit.

Ethics & Privacy

Challenge: Generative AI raises concerns around data privacy, surveillance, and bias in content that educators must navigate.

Strategy: Develop clear guidelines for ethical AI use and provide training in AI literacy and data stewardship.

Key Research Findings

Research highlights from leading studies on AI and teacher workload:

ISTE

2024 Whitepaper

50%+ educators using AI for planning; two-thirds see significant teaching benefit.

UCI

2023 Study

AI feedback on student writing comparable to human evaluators in clarity and tone.

HWM

Jagged Frontier

AI boosts some tasks significantly; others still need deep human input and judgment.

CDT

2024 Report

Without proper training, AI risks exacerbating inequality and eroding trust.

Steps for Responsible AI Integration

A practical roadmap for integrating AI while managing workload:

Assess current teacher workload patterns and identify repetitive tasks where AI can provide the greatest time savings

Select AI tools with proven research backing and evaluate them for accuracy, bias, and alignment with your curriculum

Invest in professional development that builds AI literacy, ethical awareness, and practical skills for all educators

Establish review protocols so all AI-generated content is verified for quality and cultural relevance before use

Monitor outcomes over time, tracking both workload reduction and any unintended consequences of AI adoption

“The net effect of AI on teacher workload depends on training, tool quality, and institutional support. Without these, the promise of time savings remains unfulfilled.”

— SRI Education, CIGALE Expert Review Report (2025)

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Thank You

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