



In a High School Forensic Science Class, the Teacher Used Magic School AI to Shorten the Learning Feedback Loop

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The Problem: Delayed Feedback Loop

In some high school classes, students are assigned to submit electronic discussion posts but experience significant delays in receiving teacher feedback about the accuracy or quality of knowledge expressed in the post. In this practice brief, Ms. Julia Tingey, a high school teacher in Utah, reported a turnaround time of 3-5 days for giving feedback and eventual grading of these assigned posts to her students. She worried that by the time students got her notes on how to improve, the class has already moved on to new topics, making that feedback less useful for learning. This feedback delay disproportionately impacts students who need guidance the most, widening achievement gaps and increasing frustration.

"I spend two to three weeks grading my students' discussion posts, and I also have to interact with the students about their posts in Canvas, so that takes up another week."

Julia Tingey (2026)

The Solution: A Guided AI Scaffold

In Ms. Tingey's 11th-grade forensic investigation course, 15 students used a custom-built AI chatbot (created with Magic School AI) to support their drafting of electronic discussion posts for an assignment titled "Forensic Investigation." This was not an essay-writing bot. It was a learning scaffold designed for student use, and it had strict guardrails:

- **Grounded in Facts:** The AI relied on Retrieval-Augmented Generation (RAG), responding only with approved course materials. It did not retrieve the world's body of knowledge captured in large language models.
- **A Personal Trainer Model:** The AI prompted students to address all parts of a question for the "Forensic Investigation" assignment and encouraged a detailed electronic post.
- **No Ghostwriting:** The AI was explicitly prohibited from rewriting, editing, or generating the student's electronic post.
- **Student Ownership:** The AI summarized the student's own ideas, which the student then used to write the final electronic post.

This model positions AI as a learning scaffold during thinking—not as a replacement for student work or teacher evaluation.

Key Outcomes

- **Higher Quality Work:** Ms. Tingey reported that students produced more thorough initial electronic post drafts and stronger final electronic posts. The majority of students confirmed that the chatbot pushed them to be more thorough and to address all parts of each question. As one student shared, the AI's follow-up questions helped them "think about the question from a different angle."
- **Immediate Feedback:** Students valued real-time feedback while ideas were still forming. Several students noted that knowing they would receive immediate



feedback motivated them to put more effort into their initial responses, which the authors presumed was less likely when the 3-5 days of feedback loop occurred. One student appreciated that the AI “gave us positive reinforcement when our draft electronic post was accurate,” while another valued how it prompted them “to go into more depth in their post about certain aspects of the question.” The AI chatbot significantly tightened the feedback loop for students in their development of electronic posts as it engaged them immediately and continuously, which was impossible for Ms. Tingey to do.

- **Ethical Clarity:** Transparent, required AI use reduced anxiety and covert misuse.

What This Required of Ms. Tingey (and What It Didn't)

Developing the customized AI bot only requires configuring a reusable template on a district-approved platform (Magic School AI) by inputting the electronic posting rubric and specific feedback guidelines. Ms. Tingey remained fully responsible for assessment and grading. The bot did not replace Ms. Tingey's instruction nor her professional judgment.

Differentiation and Student Choice

Not all students engaged with the AI tool at the same level. Students who were already strong writers used it just for quick checks, while students who needed more help relied on it heavily to structure their draft ideas for their electronic posts. This variation in use was expected. No student was penalized for using it less. Ultimately, the AI acts as an adjustable tool: students can lean on it heavily when they are struggling and choose to rely on it less as they become more independent and confident

in their writing. It functions to scaffold up when needed and scaffold down when not needed, which should optimize student learning.

Challenges and Friction Points

- **Technical Limitations:** At times, the AI condensed detailed student electronic posts into overly simplistic summaries. This was particularly discouraging for students who had put significant effort into their post; they felt their unique voice was obscured and were forced into the tedious task of verifying the bot's summary feedback against their original draft posts. Student feedback suggested that the chatbot's summary feature needs improvement. Some students noted that it simplified their answers, leading them to re-prompt the AI or paste in their original responses.
- **Teacher Confidence:** Many educators need professional learning to feel comfortable developing a bot that offers guided prompts.
- **Student Resistance:** A few students perceived the tool as unnecessary. In anonymous feedback, some students expressed a preference for working independently. One noted, “I think it's just an extra step that doesn't really do much,” while another felt the chatbot occasionally asked follow-up questions that “didn't really have anything to do with the students electronic draft of their post.” However, even among resistant students, several acknowledged the tool's quality, suggesting the weakness was more about personal preference than the design of the chatbot. Also, for some, the task demand of the production of an electronic post was too low to engage their bot. Educators should



consider the complexity of assignments so students will find it useful as they get stretched intellectually and their writing product is held to more stringent expectations.

Family-Facing Assurances

- The AI tool does not store or sell student data.
- AI use is task-specific and time-bound. Students do not use it beyond the duration of the assigned task, which is a concern for parents of students engaging deeply with social media.
- Teachers continue to evaluate the accuracy and quality of independent student thinking.

Scaling and Policy Alignment

While this pilot occurred in a single class, the core elements—guardrails, transparency, and formative use—are adaptable across subjects, grade levels, and classes. Schools can standardize acceptable-use expectations while allowing instructional flexibility.

Misuse of AI remains subject to existing academic integrity policies.

Recommendations for Education Leaders

1. **Shift Policy:** Move from prohibitive rules to guided-use models.
2. **Invest in Teachers:** Provide professional learning in AI-augmented pedagogy, while simultaneously keeping AI teacher-centric.
3. **Set Clear Rules:** Define acceptable use to reduce confusion. Be ready to alter rules as clearer directions emerge.

4. Focus on Process and Final Products:

Prioritize drafting and feedback early in the process, switching focus to the final products after learning has been achieved and product evaluation can confirm it.

Teacher Report

“As a teacher, I developed this AI chatbot to keep learning transparent rather than secretive, which helps reduce cheating.”

“My students get timely feedback right when they need it, so they can adjust and improve in the moment instead of waiting days.”

“I stay in control of both instruction and assessment, using this AI chatbot as a support tool—not a replacement for my professional judgment.”

Why This Matters Now

AI does not need to undermine academic integrity, but it does need to elevate learning! When AI is used as a structured, educator-led learning scaffold, it can elevate student thinking, close feedback gaps, aid students in self-regulating their learning, and better prepare students for an AI-integrated future.



References

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