

Enhancing Education through Effective Technology Integration

How can technology be used to enhance student engagement and improve learning outcomes, particularly through AI in education? How should we approach the acceptance of AI-generated work while ensuring the authenticity of student-produced content?

Marilena Neocleous

marilenaneo@gmail.com



Why do we need technology in class?

- 1 Improved Practice
Technology can enhance student practice.
- 2 Quality Explanations
Technology can improve the quality of explanations and modeling.
- 3 Effective Assessment
Technology can improve student assessment and feedback.

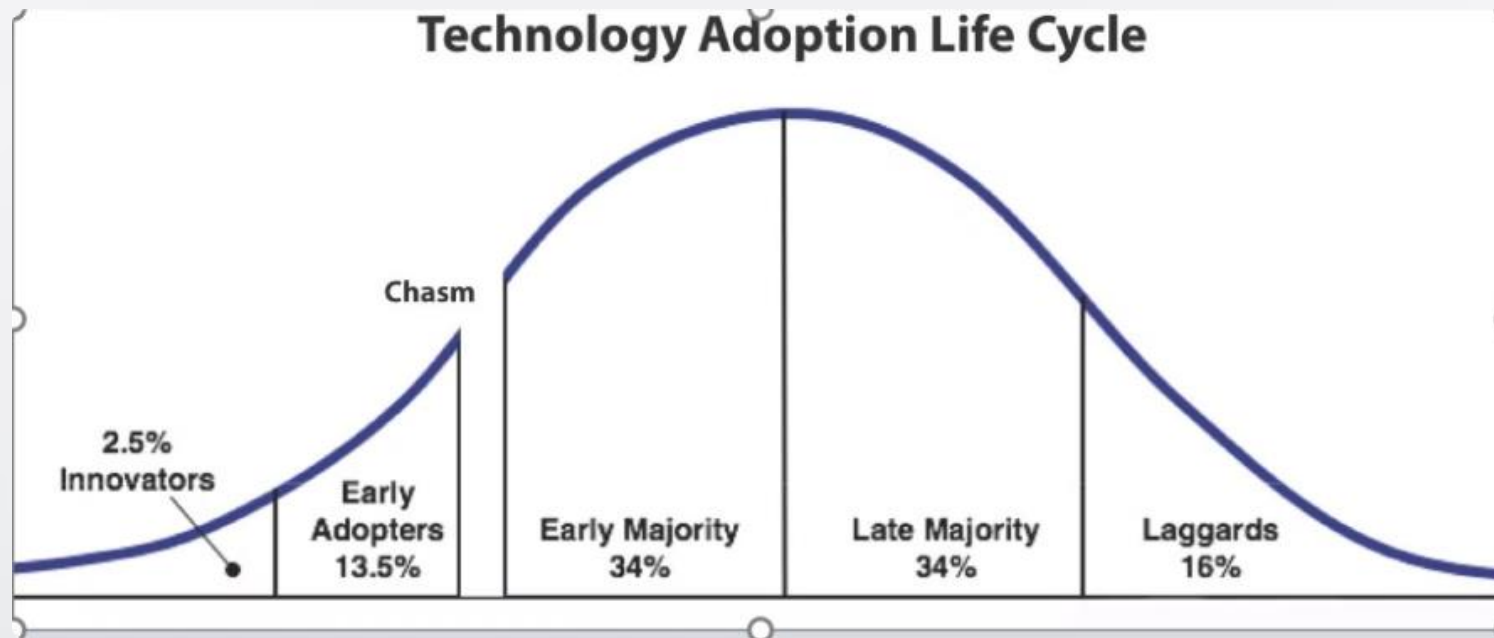
Using Digital Technology to improve Learning, EEF Guidance Report (2019)

- 4 Digital Competence
Digital competence is a vital 21st century skill.

"Digital Competence: the vital 21st century skills for Teachers and Students,
www.schooleducationgateway.eu



Diffusion Theory: A Tool for AI Adoption in Education



The theory of diffusion, developed by Everett Rogers, describes how new ideas and technologies are adopted by individuals and groups. This framework can be valuable for understanding the adoption of AI in education, helping educators and researchers better target their efforts to convince laggards and late adopters.

[Diffusion of Innovations: What Is It? How Does It Work? | Blog SYDLE](#)



Appealing to Laggards and Late Adopters

1 Address Concerns

Acknowledge and address the concerns of laggards and late adopters regarding AI in education. This might include concerns about job displacement, data privacy, or the potential for AI to exacerbate existing educational inequalities.

2 Focus on Practical Benefits

Emphasize the tangible benefits of AI, showcasing how it can personalize learning experiences, provide individualized feedback, and improve efficiency in administrative tasks. Offer concrete examples of successful AI implementations in education.

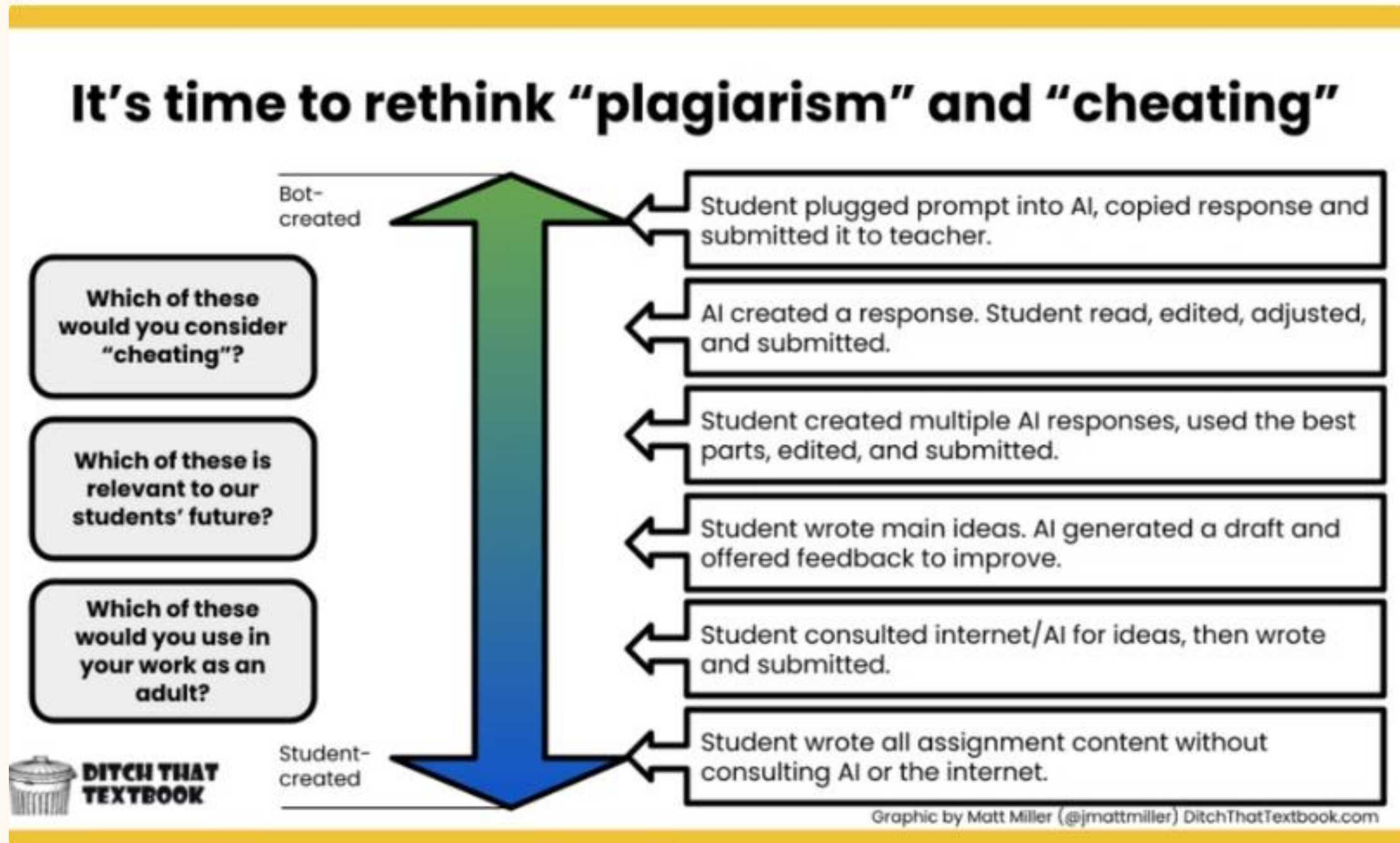
3 Build Trust

Encourage peer-to-peer learning and networking among educators, allowing them to hear firsthand about the benefits of AI from trusted colleagues. This approach can build trust and overcome resistance.

4 Provide Support

Offer comprehensive training and support programs to help educators learn how to effectively integrate AI tools into their classrooms. This can empower teachers to overcome their anxieties and feel more confident in using AI.

A good starting point..





Preparing Effective Assignments

1

Test Your Prompts

Use AI tools to evaluate your assignment prompts. Refine or replace prompts that generate generic responses.

2

Include "Trojan Horse" Words

Embed hidden keywords in assignments. These help detect if students use AI tools inappropriately.

3

Know Your Students' Work

Use in-class writing and formative assessments. Build a clear picture of each student's unique style and abilities.

4

Master Prompt Writing

Learn to craft effective prompts. Include key elements like persona, objective, audience, context, and boundaries.

Crafting Effective Prompts

Prompt to ChatGPT:

Example: **As a Greek IGCSE student** and **draft an article** for the **school's website** that **presents the pros and cons of distant learning**. Aim for an average of **350 words**, spread across 5-6 paragraphs.

Elements of a good prompt:

Persona: the role that the AI should adopt

Objective: what the user aims to achieve with the prompt

Audience: specifying the recipients, needs, demographics and knowledge level

Context: background information to help AI generate informed responses

Boundaries: limitations (word count, format, topics to avoid)

What is academic dishonesty?



Exploring Academic Dishonesty in classroom discussions

Explore academic integrity through real-world examples with your students.

Co-examine instances of plagiarism and their consequences.

This collaborative approach will deepen the students' understanding of ethical practices in academia.

[Link to article:](#)

[Fostering Students' Academic Integrity in High School | Edutopia](#)





Implementing a Stoplight Model for AI Use

1

Red Light: Individual Assessment

Traditional quizzes and exams. Focus on evaluating personal knowledge without AI assistance.

2

Yellow Light: Guided AI Integration

Long-term projects and group activities. Use AI tools like [Magicschool.ai](https://magicschool.ai) with teacher permission.

3

Green Light: Open AI Collaboration

Creative writing and research projects. Students discuss AI usage plans with teachers beforehand.

Innovative Assessment Strategies

Two-Lane Assessments

Lane 1 focuses on higher-order thinking skills.
Lane 2 evaluates human-AI collaboration process.

Experience-Based Assignments

Require students to analyze specific examples or personal experiences. AI struggles with these tasks.

AI-Assisted Submissions

Students include AI-generated content as an appendix. This promotes transparency and critical thinking.





Collaborative Writing with AI

1

Initiate Writing

Students begin the writing process independently. They formulate initial ideas and outlines.

2

AI Iteration

AI helps refine ideas, expression, and analysis. Students guide the AI's input.

3

Document Collaboration

Students record their reasoning and process. This demonstrates learning and critical thinking.

4

Assessment

The documented process is graded more heavily than the final product.

Creating Dynamic Argument Maps

1

Topic Selection

Educators or students choose a debate topic. They create a discussion on Kialo Edu, setting the stage for engagement.

2

Argument Construction

Students add their arguments, responding to others. The platform encourages concise, focused contributions.

3

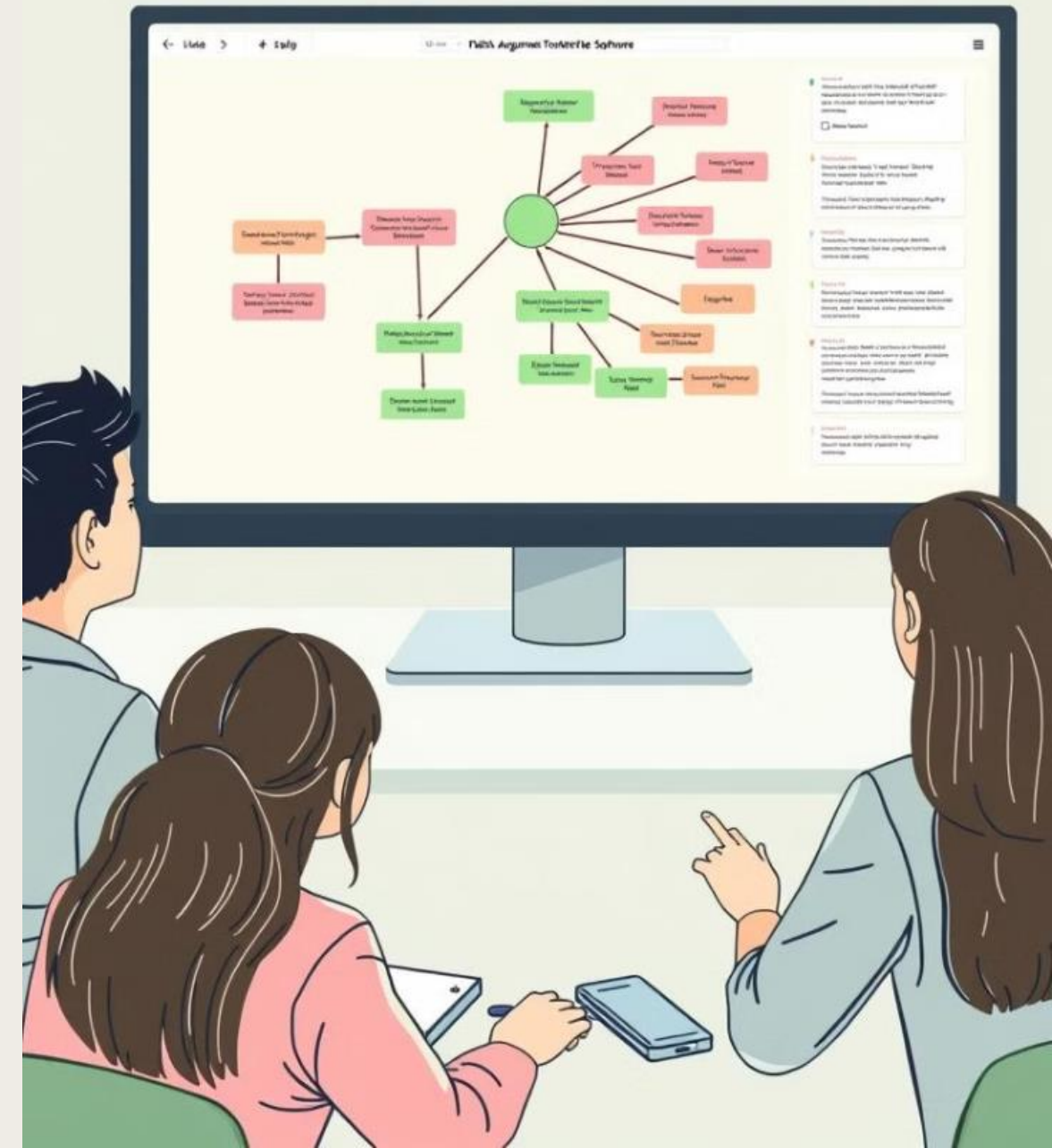
Visual Representation

As students participate, Kialo Edu generates a real-time visual map of arguments and counterarguments.

4

Feedback and Refinement

Educators provide feedback. Students can revisit and refine their arguments, deepening their understanding.



Expanding our Digital Toolkit

Screencastify

A powerful screen recording tool that allows students to create video presentations and tutorials.

It's perfect for demonstrating complex ideas or walking through problem-solving processes.

Padlet Video Booth

An interactive digital bulletin board that now includes video capabilities.

Students can post video responses, fostering visual debates and collaborative discussions.

Flip features in Microsoft Teams

Students can participate on their own time, promoting thoughtful responses and inclusivity.

Fun filters and a social media-like interface encourage unique and engaging student contributions.

"Worrying about how students might use AI to cheat is not the most productive question to focus on. The better question is, even in the era of AI, how can we best teach our students?"

1 Shift in Focus

Rather than fixating on potential cheating, educators should prioritize developing effective teaching methods in the AI era.

3 Adapting Teaching Strategies

The key is to adapt our teaching approaches to leverage AI as a tool for learning rather than viewing it as a threat.

2 Embracing AI

The article encourages educators to "embrace the bot" and design writing assignments that incorporate AI tools.

4 Student-Centered Approach

By focusing on how to best teach students in the AI era, we can create more engaging and relevant learning experiences.