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Tech Savvy Teaching: Exploring Technology Across K-12 Classrooms

Dr. Lee Jones & Dr. Cecil R. Short
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Slides at:

<https://bit.ly/esutechsavvy>





Introduction and Welcome

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Professors of Secondary Education



Dr. Lee Jones
Assistant Professor
Secondary Education
The Teachers College

Background:
Makerspaces, STEM, K-12 Science and Technology

Dr. Cecil R. Short
Assistant Professor/Director
Secondary Education
The Teachers College

Background:
Blended and Personalized Learning, Teacher Preparation, Open Education



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Starting Questions

What is educational technology?
What kind of technology do you use in your
classes or at your school?

Technology Use

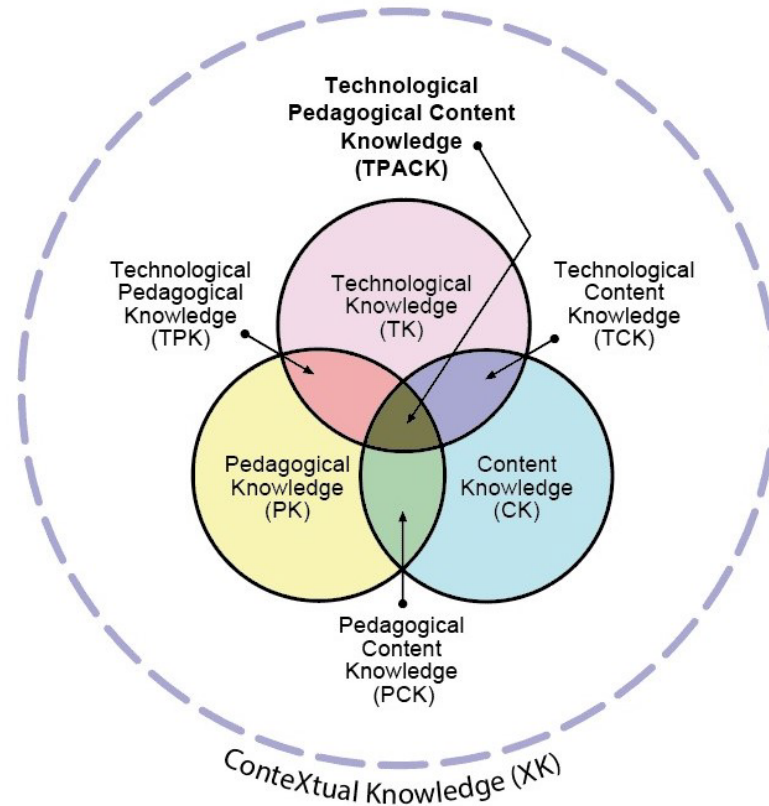


Before the Printing Press (1233)



After the Printing Press (2016)

What is Educational Technology

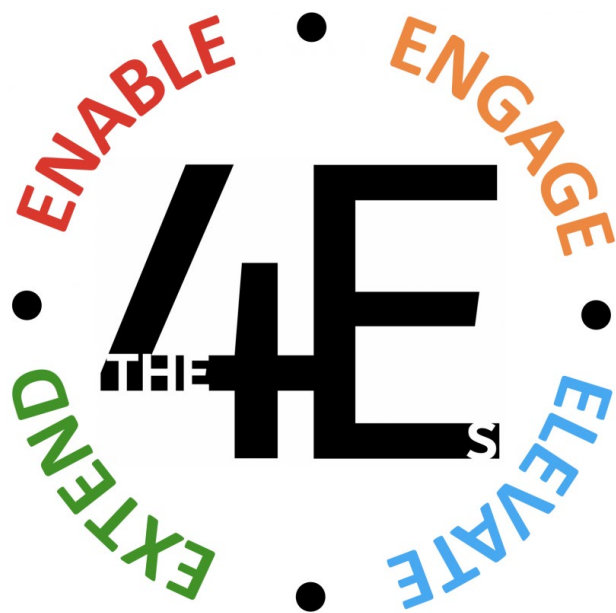


Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.

Read More: <https://edtechbooks.org/encyclopedia/tpack>



How do We Meaningfully Use Ed Tech?



C	CREATIVE	CR	CA	CT
I	INTERACTIVE	IR	IA	IT
P	PASSIVE	PR	PA	PT
		REPLACES	AMPLIFIES	TRANSFORMS
		R	A	T





Hardware

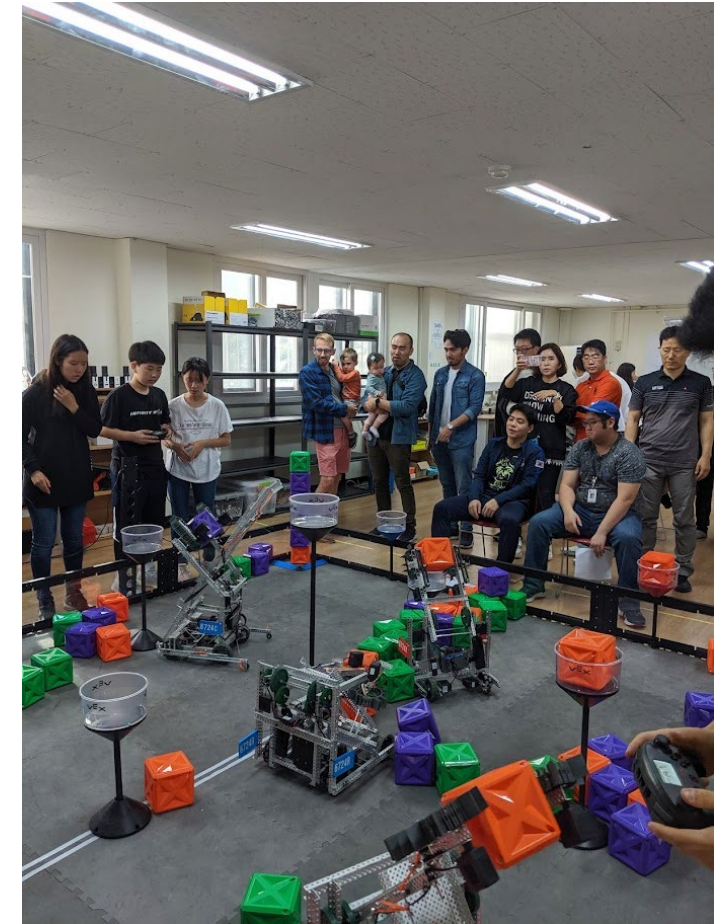

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Hardware Advancements

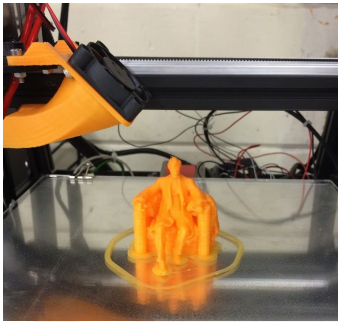
Tools in K-12 are...

- More available
- Easier to use
- Promote creativity, problem solving, and collaboration



Tools of the Trade

3D Printing



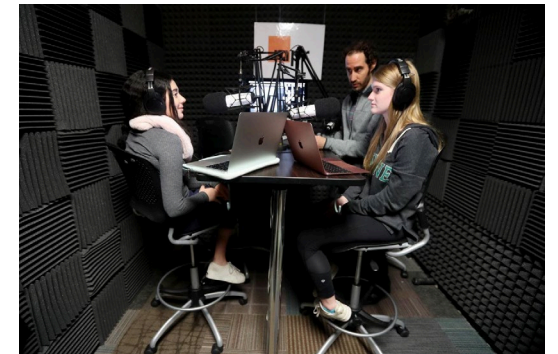
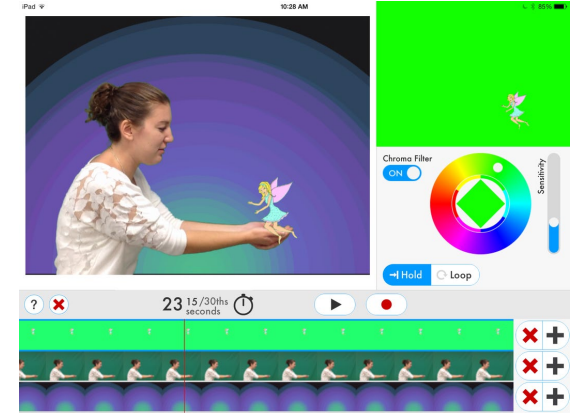
Laser/CNC



Traditional



Audio/Visual



Tools of the *Trade*

- What do you want to teach? It doesn't matter.





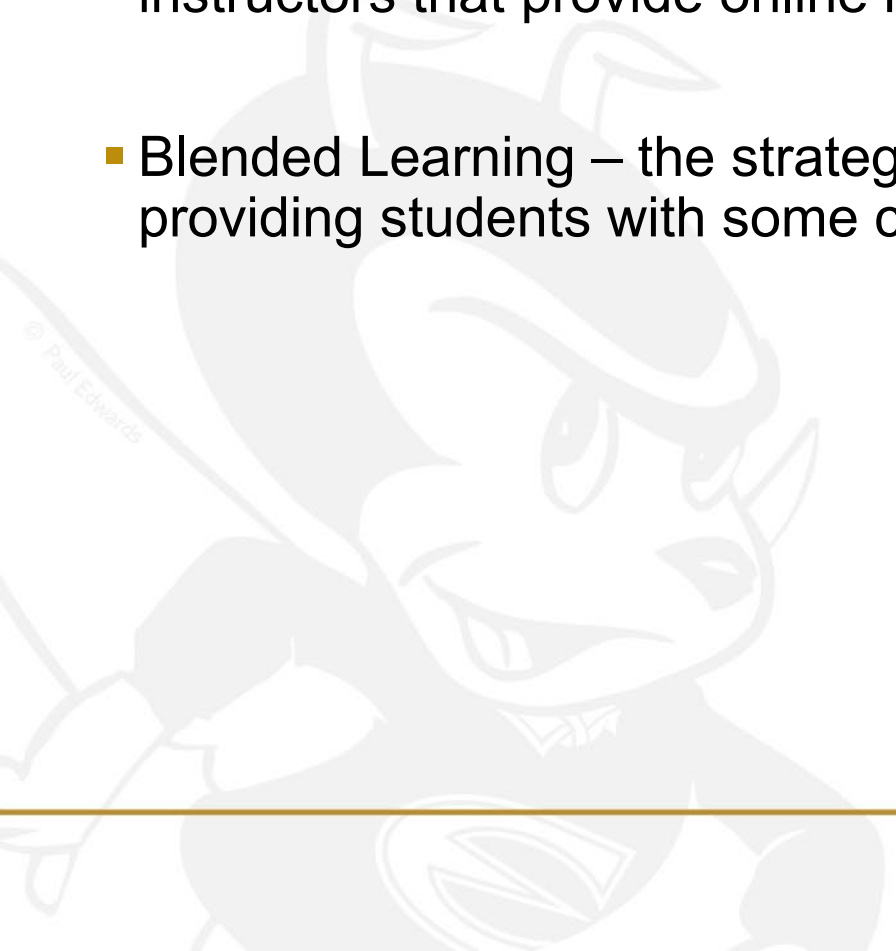
Software

Software Advancements

1. Internet and Web-Based Learning
2. Learning Management Systems (LMS)
3. Open Educational Resources (OER)
4. Blended Learning
5. Massive Open Online Courses (MOOCs)
6. Adaptive Learning Systems
7. Virtual Reality (VR) and Augmented Reality (AR)
8. Cloud-Based Storage and Streaming
9. Video Conferencing
10. Artificial Intelligence

Virtual and Blended Learning

- Virtual Learning – an environment where students study a digital-based curriculum taught by instructors that provide online instruction via digital resources, video, or audio.
- Blended Learning – the strategic combination of *online* and *in-person* learning, often providing students with some control over learning goals, time, place, pace, and/or path.



Learning Management System

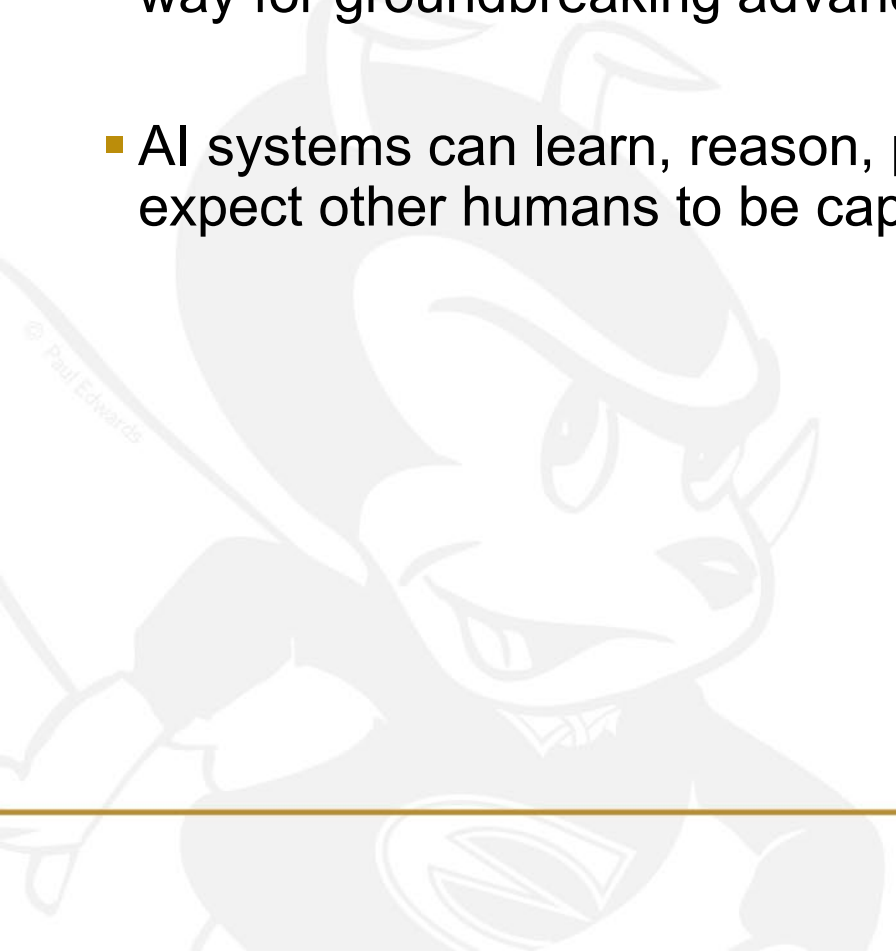
- A Learning Management System or LMS – is software that provides a virtual space to house virtual course materials and activities such as assignments, resources, and online interactions
- Learning Management Systems
 - Blackboard
 - Canvas
 - Edmodo
 - Google Classroom
 - Moodle
 - Schoology

Adaptive Technologies

- Adaptive Learning – approach to education that uses data-driven instruction to adjust and tailor learning experiences to meet the individual needs of each student.
- Adaptive Learning Systems
 - Duolingo
 - iReady
 - IXL
 - Khan Academy

Demystifying AI

- AI, in simple terms, is an innovative technology that emulates human intelligence, paving the way for groundbreaking advancement in various domains.
- AI systems can learn, reason, problem-solve, and interact with humans in the way we'd expect other humans to be capable of.



AI Tools

- Chat GPT
- Bing Chatbot
- Snap Chatbot
- Stable Diffusion (DreamStudio)
- DALLE-3
- Midjourney
- Firefly (Photoshop)
- Craiyon
- Bing's Image Creator
- Canva's AI Image Generating Tool
- Recraft
- Generative AI by Getty Images
- Wondershare
- Colossyan
- Synthesia
- Pictory
- Elai.io
- GliaCloud
- Lumen 5
- FlexClip
- Gamma
- Beautiful.ai
- Simplified
- Slidebean
- Designs.ai
- Pitch
- Presentations.ai
- Kroma.ai
- Tome
- DeckRobot (PowerPoint plug-in)
- Write Grader
- Quillionz
- Quizziz
- Diffit
- Imagine AI
- School AI
- Magic School
- Childbook AI
- POE



Break Out Groups

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Two Groups – 10-15 Minutes Each

- Dr. Jones

Robotics and Coding

- Dr. Short

Artificial Intelligence



Quiz Time!

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Contact Informaion



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Tech Savvy Slide Deck
<https://bit.ly/esutechsavvy>



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ESU Scholarships
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