Empowering Youth: Exploring AI Tools for Learning, Storytelling, and Enrichment

PRESENTER: JENNIFER HE, FOUNDER WEBGLOW AI
Hello, I’m Jennifer He

- 15+ years experience working as a web designer and UX specialist for higher ed, libraries, art institutions, and non-profits
- Experiencing teaching technology classes to students and librarians
- Founded WebGlow AI teaches students to use AI tools to improve their lives and offers web design services
Welcome!

Did you know there is **AI technology in your pocket**?

Mobile devices have AI functionality:
- Facial recognition
- Speech recognition
- AI infused apps
- Social media apps
- GPS

What is the most often common type of prompt for ChatGPT?
Type answers in the chat!
About SEPAC

Special Education Parent Advisory Council

Mission & Goals

- Support parents, children, and the school
- Fill open positions - Secretary/Communications & Treasurer
- Meet and greet parents at PVCICS school events
- Bring in dynamic speakers and more!

Visit the SEPAC’s Webpage
Contact Us: pvcicssepac@pvcics.org
Agenda

— Introduction
— AI Tools for Learning AI Technology
— AI Tools for Educational Support
— AI Tools for Executive Functioning & Emotional Regulation
— AI Infused Educational Projects
— Q&A
Introduction to AI Technology

Topics Covered

- Definition of AI Technology
- How does AI work?
- General vs Narrow AI
- Pros & Cons
Basic Definition of AI -

Artificial intelligence leverages computers and machines to mimic the problem-solving and decision-making capabilities of the human mind.

Examples: self-driving cars, natural language processing, online shopping, social media.
General vs. Narrow AI

**General AI**
- Human-Like Intelligence
- Common Sense Reasoning
- Transfer Learning
- Self-Improvement
- Consciousness and Self-Awareness
- Human-Level Communication
- Adaptability to Unforeseen Situations
- Ethical and Moral Decision-Making
- Creativity

**Narrow AI**
- Specialized Functionality: Narrow AI is designed for specific tasks or domains and excels in performing those tasks but lacks broader capabilities.
- Limited Learning
- No Common Sense Reasoning
- Domain-Specific
- No Self-Improvement - relies on human prompts for self-improvement
- No Consciousness or Self-Awareness
- Limited Communication understanding and context.
- Difficulty with Novelty
- Lack of Ethical Judgment
- Limited Creativity
How Does AI Technology Work?

To put it simply, AI works by combining large data sets with intuitive processing algorithms. AI can manipulate these algorithms by learning behavior patterns within the data set.

It’s important to understand that AI is not just one algorithm. Instead, it is an entire machine learning system that can solve problems and suggest outcomes.

**Example** - We could make an AI algorithm that recognizes animal faces (for a dog door) to let in our own dog and keep other animals out. The better the data in the dataset and the more training that our AI algorithm receives the better it would become at accurately recognizing animal faces and solving our real-world problem.
AI Pros & Cons

Pros
- Efficiency
- Automation
- Reduces human error
- Solutions to real-world problems
- Improved decision making
- Better predictions
- Cost savings
- Creative potential

Cons
- Not perfect
- Privacy concerns
- Job replacement
- Misinformation
- Copyright concerns
- Potential bias
- Safety and security risks

Fun Fact: Why does generative AI tools produce different content? It’s because of **temperature** - or amount of variation/creativity in a response. ChatGPT 3.5 has a temperature set to about .7 (fixed point).
AI Technology Expectations

Gartner Hype Cycle - 5 Distinct Phases of Technology
Generative AI Tools - Best Practices

- Understand how the tool works
- Be specific when writing prompts
- Don’t enter sensitive or personal data
- Realistic expectations - No AI tool is perfect!
- Test and iterate
- Be aware of ethical and legal considerations
- Be intentional about the amount of content you create
- Avoid "AI Creep" - use one main tool like ChatGPT
- If the task is complex and you want a premium result - outsource to a person
Learning AI Technology

Topics Covered

- Tools for Learning AI Technology
- AI Tools for AI Demos & Simulations
Tools for Learning AI Technology

- **Teachable Machine** - One of the easiest way to teach computer how to recognize objects with AI
- **TensorFlow** - an open-source software library for machine learning (ML), create neural networks in user’s browser
- **Raise AI Playground** - MIT project to teach AI with code blocks, design is reminiscent to Scratch
- **Cognimates** - AI playground to program with AI
Robotics for Learning AI Technology

- **Googles’ AIY Kits** - Open-ended Maker kits that let users build AI according to their creativity
- **Lego Mindshares** - Coming soon, AI infused lego builds
- **Ozobot** - Coding robot
- **Cozmo** - Article about AI features, AI gives robot emotions.
AI Drawing Tools - Perfect for Demos

QuickDraw -
QuickDraw - lets users draw and the AI tool guesses what the drawing. Developed by Google, free.

AutoDraw -
AutoDraw - lets users doodle and the AI guesses the drawing and completes the picture. Good for demos, as students can learn the pros and cons of AI by using the tool. Developed by Google Creative Lab.
Google’s AI Text Kitchen FX Image Generator - lets users experiment with generating images for free using AI. Experiment with image styles and more.
**Featured AI Tool - Instrument Playground**

*Instrument Playground* - lets users create music by specifying an adjective and musical instrument. The AI produces a sound bite that users can download. Google AI Experiments, free
Featured AI Tool - Thing Translator

**Thing Translator** - lets users take pictures of things over a computer or mobile device and the AI will identify the item. Perfect for AI demos. Run by Google's machine learning API's, Free.
Featured AI Chatbot Tool - Talk to Mitsuku

Mitsuku - One of the most advanced AI chatbots. Sign up to talk for free. Voice, text, video chat. Play games & learn new things. Works on Discord.
AI Tools for Inclusive Educational Support

Topics Covered
- AI Tools for Dyslexia & Reading Support
- AI Tools for Writing Support
- AI Tools for Math Support
- AI Tools for Artistic Support & Art Therapy
- AI Infused Projects
Dyslexia + Reading Support

- **Natural Read** - AI-infused text-to-speech, free trial
- **Speechify** - AI tools reads to users
- **Eleven Labs** - Converts text to speech with free web-based generator. AI text-to-voice software, free trial
- **Diffit** - a differentiation tool that uses AI to rewrite text at different reading levels, translate content, and generate definitions and questions related to the text, pricing for schools, educators

Learning resources for all.

Teachers use Diffit to get “just right” instructional materials, saving tons of time and helping all students to access grade level content
Microsoft’s Reading Coach - assists children with reading with audio input and AI designed assessment with words that need to be practiced. One mode let’s children make their own story by choosing characters, etc. Another mode let’s user’s upload their own text to the platform, allowing students to practice reading home work assignments at home.
Writing Support

- **Quill** - non profit organization that offers free literacy tools to make students better writers and learners
- **Grammarly** - AI infused grammar checker, plagiarism support, etc
- **Hemingway Editor** - free app and web based platform that helps support writing
- **Notion AI** - best for notetakers
- **Audio Pen** - Free audio to text transcriber
- **Google Live Transcribe** - transcribe classroom lectures live for free
- **Google Translate** - One of the best free multilingual translation tools with AI

**Helpful Tip:** AI plagiarism checkers claim to be 99% accurate. Testing the platforms show up to 30% inaccuracy rate.
**Featured Tool - Smarticles**

**Smarticles** - Turning Amazon Alexa into a conversation partner for young learners who struggle with social interactions. Evidence based activities. Contact for pricing.

 Meet Our Personalized Conversation Partner for Young Learners

Smarticles builds Alexa Skills focused on strengthening communication and social skills in K-3 students.

Although students of all abilities can use our apps, we are passionate about assisting students with Autism and speech delays. Helping them connect with others improves their quality of life and gives parents and teachers hope for the future. This is why we exist.

Explore our Alexa Skills  
Schedule a Demo
**Featured Tool - Braina**

**Braina** - Marketed as a personal assistant that helps with productivity and accessibility. Dictation software, text-to-speech functionality. Freemium version.

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**Braina AI Virtual Assistant**

Braina is an Artificial Intelligence (AI) assistant & Dictation software that performs many tasks when asked in natural language and serves as a virtual assistant that helps you perform various operations quickly.

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**Have a question or need a custom quote?**

If you have any query or want more information regarding any of our products then feel free to contact us.
AI Tools for Visual Support

- **Lookout (Google App)** - free ai-infused assisted vision app.
- **Seeing AI (Microsoft)** - free app for visually impaired people that narrates the world around you, including reading text out loud.
- **Beeline Reader** - Marketed as an AI tools to read faster and easier, on digital devices, all day long, free chrome extension.
- **Google Lens** - Article from Perkins School for the Blind, free app let’s users search and identify what they see.

**Seeing AI**
An app for visually impaired people that narrates the world around you
AI Tools for Math Support

- **Khanmigo** - Khan Academy learning assistant, only $4 a month
- **Mathway** - free web-based AI-infused service that helps solve math equations
- **Microsoft Math Solver** - web-based AI tool and apps that help solve math equations, all free

**Helpful Tip:** What is an AI hallucination? It’s when an AI tool makes up an answer that’s inaccurate, but insists that it’s correct. Our advice it to always verify that answers are correct.
AI Tool for Art Support & Art Therapy

- **DeepThInk** (coming soon) - AI brush designed for Art Therapy
- **AutoDraw** - created by Google, draws simple drawings based on users’ doodles
- **MidJourney** - one of the best image generators, originally developed to create sci-fi graphics.
- **Canvas by Nvidia** – An excellent instrument for turning simple brushstrokes into landscape drawings and pictures using different styles.
- **AIComicFactory** - free web-based AI tool that creates a whole comic strip based off of a single prompt. Premium version lets users add dialogue.

**Fun Fact:** Open AI created **Sora** (coming soon) that turns text prompts into video.
Featured Tool - Sesame Enable

Sesame Enabled - For mobility support, uses AI for touch free control of mobile devices. Free & paid versions.
**Breathing.ai** - Designed for older students in mind, work wellbeing companion app, monitors users patterns and suggests mental health exercises. Free chrome extension, gives breaks suggestions, color filters, relaxing music, and breathing reminders.

**Unlock Peak Performance with breathing.ai**

Boost productivity, creativity, and wellbeing at work with our browser extension. Our solution is based on 10+ years of award-winning research and has 18% more engagement than the industry average.

**Forbes**  **Fast Company**  **Northeastern University**  **MIT**

Features & Partners

**Refocus with a quick break**

Recharge and reset with a short video reminding you to adjust posture, drink water or take a breath.

**Explore the library**
Use ChatGPT 3.5 (free version) to ask about creating an inclusive lesson plans to help with [insert extra support criteria].

Example prompts:

- “Please create a lesson plan for a 2nd grader with Dyslexia to learn about outer space with lots of breaks.”

- “Please create a homework schedule for a 5th grader with ADHD who positive reinforcement and rewards for extra motivation.”

- “Please create a dynamic and engaging sensory-friendly story time for children with diverse special educational needs, such as visual impairments, neurodiversity, and mobility issues for grades 1 - 3.”
AI Tools for Executive Functioning & Emotion Regulation

Topics Covered
- AI Tools for Executive Functioning & Regulation
- AI Tools for Building Social Emotional Skills
- AI Tools for Creating Social Stories
AI Infused Robotics for Autism

**Moxie Robot** -
Designed to promote children’s mental health, social-emotional learning skills. $600+ for new and refurbished models.

**Lux AI’s QT Robot** -
Pricier Robot built for children with autism, advanced sensing and processing skills. Approx. $2,000 for parents, $3,000 for schools

**Interesting Fact**: According to research, children with autism may engage more readily with robots.
AI Pets - Lovable Companions

- **Moflin** - Not available for purchase yet, form emotional attachment to owner
- **MarsCat** - Bionic AI infused cat created by Elephant Robotics, cat like behavior, gets more advanced over time
- **Sony Aibo** - Robotic AI infused dog claims to have autonomy and form own personality over time
- **Lovot** - Japanese made robot made for people with dementia, very human-like

**Fun Fact:** Did you know that researchers are using AI to communicate with animals in the future?
Featured Tool - Teddy.AI

**Featured Tool - Goblin.Tools**

**Goblin.Tools** - Free web-based AI tools designed by a neurodiverse computer scientists to help with executive functioning. Tools helps break tasks down into more manageable tasks and assist with estimating the time a certain task may take.
AI Infused Social Stories

“Social Stories were devised as a tool to help individuals with ASD better understand the nuances of interpersonal communication so that they could "interact in an effective and appropriate manner." - Wikipedia

- **Ella** - create social stories, 5 stories a month for free
- **Magic School AI** - social stories generator
- **Spark Story** - create a social story for free
Creating Educational Projects with AI

Topics Covered

- Create a Fantasy World with AI
- Create a Custom Storybook with AI
- Create Custom Coloring Sheets with AT
- Free AI Educational Resources & AI Tools Directories
Create an AI-Infused Fantasy World

- Use world building AI tool, **World Building**, to create the text of a world with environment, characters, story plot line, etc.
- Use an AI image generator like **MidJourney** to create the fantasy world’s image.
- Try **AIDungeon** for building a online game fantasy world that you can build and play.
Create a Custom Storybook with AI

- **BookBildr** - picture book creation tool that is marketed as an educational tool. Create a book with AI generators and then pay for the printed book.
- **CreateBookAI** - Create a children's illustrated book in 5 minutes.
- Pair **MidJourney** + **ChatGPT** + **Canva** - Get a high quality book using Canva’s free book templates.
AI Tools for Creating Coloring Pages

- **MidJourney + Canva** - free and paid versions of MidJourney, may need to resize images to a larger scale
- **Leonardo.ai** - Freemium, works on Discord
- **Color Pop AI** - Free app, must sign up with an email account, coloring pages are ready to go within minutes
AI Art Project Ideas

Use an AI image generator like *Midjourney* / *DALL-E* to generate:

- Paper Dolls & Popsicle Stick Dolls
- Art Collage
- Book Marks
- Paper Lanterns
- Paper Masks
- Board Games
- Backdrop for Shoebox Murals
- Holiday Themed Printables
- Stickers!
Free AI Tool Resources

- Texas Tech’s Library AI Guide -
- Top AI Tools
- Futurepedia - Largest AI directory with tools
- Future Tools - AI directory with categories
- There’s an AI for That - free tool that let’s you search for AI tools.

Free AI Courses:
- Elements of AI
- Andrew Ng’s Course in Coursera
“Artificial intelligence is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity.”

-Dr. Fei Fei Li

Founder of ImageNet, the dataset that enabled rapid advances in computer vision in the 2010s
Thank you for attending!

Q & A

We hope you can join us again on our next SEPAC meeting.

Feel free to reach out or ask Jennifer or Phil (SEPAC chairs) questions:

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