ChatGPT- Above the Noise

Facts vs. Myth and Fears

If you've had time to pay attention, you may have picked up on the noise happening in K-12 circles around ChatGPT and the myriad of other AI web tools that suddenly are in the spotlight. Why all the noise and how do EdTech minded administrators respond?

What is AI?

Artificial Intelligence is the intellect shown by machines which is based on the synthesized and predictive inferences of the information with which they are trained. In other words, smart machines, programmed to process data and perform human-like tasks. There are many types of AI applications, but this brief is focused on generative AI, which has been around for a while, but recently took a leap forward by producing created content.

What is Generative AI?

It's the natural language and informed response capabilities of generative AI that has been surprising educators. GPT stands for "Generative Pre-trained Transformer," which is a bot using a language model that generates answers to our questions. The transformer is the engine, and Chat GPT is running GPT version 3.5. Generative AI provides answers from the sum of a vast corpus of training data.

Generative AI – has already found value in marketing, advertising, drug development, legal contracts, video gaming, customer support and digital art. It is essentially the application of algorithms that can be used to create new content, including text and code (ChatGPT, BingGPT), audio (Aiva.ai, Soundful), images (Stable Diffusion, DALL-E, Midjourney), and videos (Runwayml, Pictory.ai).

Gartner declared generative AI as one of the most disruptive and rapidly evolving technologies in their 2022 Emerging Technologies and Trends Impact Radar report. Furthermore, CoSN's Driving K-12 Innovation 2023 reports that AI is one of three current Tech Enablers which are tools that support smoother leaps over the hurdles and expansive changes in global K-12 education.

ChatGPT ushered in a public change. A turbo boost has happened to web searches. We've witnessed the leapfrogging from Google Searches providing hyperlinks to a GPT chatting back and refining plausible answers. The dust up is in the response from educators who quickly realized the ease with which students could use the chatbot to "write" essays. Some school systems banned ChatGPT immediately. A good reason for this was the terms of use which initially indicated you "must be 18 years or older and able to form a binding contract with OpenAI to use the Services." That recently changed to at least 13 years old with a parent or

legal guardian's permission under the age of 18. AI technologies have been built for commercial purposes, but the educational response to Chat now has AI leadership and development teams thinking about K-12 use cases more.

The student/ teacher relationship will likely be changed forever as Chat AI matures and greater student agency could be offered with an AI assistant. There's been a general recognition that this moment in time is a unique one. It's the sort of thing you need to tell your friends about when you see it.

This is the year generative AI hit the world.

Why is it Important Now in Education & the World?

Open AI and ChatGPT hit the public as a brilliant proof of concept. Educators took notice and saw how it intersected with the assignments they provided students. Given its release before the end of the first semester of the 2022-23 school year, many teachers probably wondered if students used it on final projects and "open book" or online exams. Most AI technologies were paid for and built for many commercial purposes, but the educational response to Chat now has many development teams thinking about K-12-specific applications.

There has been a lot of discussion around banning ChatGPT or other generative AI tools. The reality is that there is no "banning of" a product like ChatGPT. You can block it on your school network, but that's only one of many ways to get to the resource. There are also digital equity issues with any filter ban, especially in this case. We don't need to ask IF generative AI WILL impact K-12; it already has and will increasingly continue to as development continues. Future developments in AI will deliver an increasing amount of useful features for K-12 educators. After understanding the technology, its promises and its limitations, educators' questions should revolve around where and how students and staff can learn and leverage its power.

Challenges/concerns with current generative AI models are similar in some ways to other digital products we use. Student data privacy, largely personally identifiable information (PII), is always at the top of the list of concerns for K-12. Some things to note about ChatGPT specifically are:

- Some K-12 districts initially blocked ChatGPT due to Open AI's "Terms of Use" age considerations.
- The company's Privacy Policy indicates significant PII collection, including log data, usage data, and device information. Districts must carefully vet this data collection through the lens of their local data use policies and relevant state and federal privacy laws and regulations.

There have already been many disruptive IT analogs to which we've adapted. Mass adoption of the internet was an information disruption. Napster was a distinct music industry disruption that is now normalized as many of us pay for a streaming version today. Google Docs for Edu (now Google Workspace) disrupted collaborative work and we've seen many predictive text adoptions in our docs, email, and chats.

Derivative works and assignments.
All of us are inspired by something when we create it, even if we don't know it. A potter rarely throws a pot that's never been conceived before. It's a derivative of what they've seen before. If unknown data sets feed AI, then everything provided is a derivative work. Strictly speaking, using chat output is not plagiarism, as it is not someone else's work outright. But it can be considered cheating. How is the chat output attributed? Educators (and eventually policymakers) need to address this. AI detection tools, by the way, are as dependable as other generative AI bot results. You can't trust them yet. We also need to acknowledge that Generative AI products thus far have proven to have bias in their training data. Users must understand this bias and have the skills to eliminate discriminatory or partisan text results.

Myths
Student critical thinking is becoming one of the most important skills we can teach in a world of AI. Knowing how to format a prompt takes some prior knowledge and skillful questioning. Even with this, generative AI deriving answers that are plausible but false is somewhat common. Scientists call this AI Hallucinating. This is more likely to happen with poor question prompts and creates some very authoritative bogus answers. Students and teachers need to apply fact-checking skills to chat-generated answers.

Myths that have sprung up from the discussion of chatbot results include the idea of Sentient chatbots. You might have seen the uncanny responses that catapulted in the media, but those responses happen because they are trained on human literature. Those responses may be sci-fi or romance novels speaking!

AI bots don't "know" anything. They are simply a knowledge doppelganger, pretending to know in a convincing manner. They simply spit back data but do not have "understanding," as we think of human understanding.

Another myth that specifically hit K-12 education is that with the ability of chatbots to write code, perhaps we don't need to teach coding anymore. The truth is that students need to understand the coding to find potential flaws and learn how to use AI generated code to build upon. We need to teach coding with this in mind and accommodate the addition of a coding assistant; perhaps like a thesaurus or some inspirational prose may help a writer.

Literacy
Like anything, being a good consumer and understanding what ChatGPT, BingGPT, Bard or other generative AI does well and poorly today will help the leader and teacher best adapt to leveraging the tool. Leaders should begin with an approach centering around teacher and administrator literacy on what AI can do and how to manage AI resources. A good place for educators to start is to consider the core objective of a task or assignment. If a new technology like generative AI can automate a component of current student tasks or assignments, how can that be used for deeper learning? Chatbots are great brainstorming partners because they know most of the internet! How can the time saved by this automation be leveraged for students? For example, can a writing assignment be improved if students team with AI to scaffold a series of ideas to write a better paper? Consider the core objectives of an assignment and rethink how generative AI like ChatGPT could aid in helping the student best learn the standard being taught.

With teachers' non teaching tasks that are reported* to be 12 hours a week, a reduction of these tedious responsibilities may be reduced with AI tools. Lesson planning is an excellent place to start using AI today. Teachers can utilize reclaimed time to provide personalized options for the most at-risk students with generative AI as the aide.

Recommendations by CoSN

Remember this moment of generative AI has ushered in a paradigm shift in society that K-12 institutions can shepherd. CoSN recommends discussing these essential topics with your leadership teams and staff to create actionable steps and policies. Here are some things to understand and discuss:

> **Awareness:** Ensure that users are aware of the AI tools and their potential benefits for K-12 education. Focusing on how to use Generative AI as a way to develop higher-order thinking skills is a good start.

> **Limitations:** Explain the limitations of the AI tools and the potential for errors or inaccuracies. Teach critical thinking skills to assess and validate AI output.

> **Ethics and Etiquette:** Promote good online etiquette, including proofreading and fact-checking. Teach Ethics in relationship to AI created or assisted work products.

> **Ongoing Training:** Provide ongoing innovation training and reinforcement on the best ways to use AI tools in a safe and responsible manner.

> **Reporting**: Educate the school community about how to report incidents or concerns.

> **Policies:** Set policies to create a culture of safe and responsible use to mitigate the potential risks associated with using AI tools in a school environment while iterating effective ways to leverage the power of generative AI.

> **Privacy and Security Measures:** Review your student data privacy policy, practices, and security measures and consider how they relate when using AI tools.

In conclusion, the challenges/concerns with current Generative AI models are similar in some ways to other digital products we use; thus, districts must ensure the use of new AI tools complies with state and federal privacy laws and regulations.

Consider the opportunities that seem to await educators who leverage AI:
- Using Generative AI text to foster higher-order thinking skills.
- Leveraging AI with data analysis for personalized learning, providing specific 1:1 instruction.
- Intelligent tutoring systems to provide real-time feedback to students.
- Predictive data analytics to identify students in need of support.

Many in the tech industry have called for governmental oversight in the way the EPA or FDA has worked to control industries that dramatically impact the human condition. Edtech industry leaders have begun to join the call given what's at stake, and the little we've seen of where AI development can end up, creating some guardrails to draw the greatest benefits while universally managing risk is prudent.

Additional Resources

Newly updated! Artificial Intelligence (AI) has the potential to influence practically every aspect of education and society. The **Artificial Intelligence (AI) in K-12** report originally released in 2020 has been updated to reflect today's ecosystem. Download it now: https://www.cosn.org/edtech-topics/network-design/

CoSN AI Resources: https://www.cosn.org/ai/

CoSN's Driving K-12 Innovation Hurdles, Accelerators and Tech Enablers.

CITE Journal Editorial: ChatGPT: Challenges, Opportunities, and Implications for Teacher Education

Responsible Use Policies: Creating Effective Responsible Use Policies for Schools

CoSN's Emerging Technologies Committee is preparing an EdTechNext report on AI to be released in early Summer 2023. You can view the final copy on the CoSN AI page: https://www.cosn.org/ai/

* Citation: 2018 report by the RAND Corporation "Teacher Working Conditions Are Student Learning Conditions"

About CoSN:
CoSN, the national association of school system technology leaders, believes that technology is an essential component of learning today, and is deeply committed to the use and distribution of technology in school systems. However, all technologies must be properly assessed for design and appropriateness in the modern classroom. Educators and companies alike must recognize and uphold their responsibilities to protect the privacy of student data.

Working together, educators and the private sector serve millions of students by providing them with the rich digital learning experiences and access needed to succeed in college, work and life. That partnership is critical to ensuring that students will have the tools necessary for success in the 21st century.

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