



CEC AI Webinar 1

Teacher Education: Using AI in Designing and Delivering Courses

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Dr. Sean Smith
Dr. Lisa Dieker





Introduction - Dr Sarah Howorth

Goal: by the end of the webinar you will have a basic understanding of...

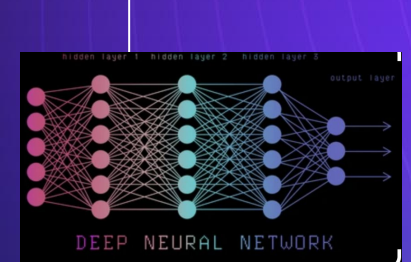
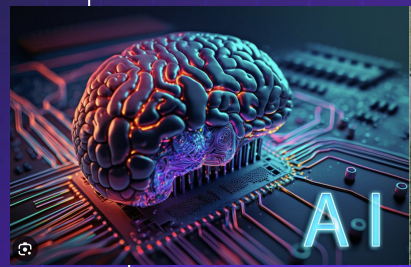
- How AI works
 - How AI can be used in education
 - Challenges associated with AI integration
- 

Artificial Intelligence

Artificial Intelligence (AI): The simulation of human intelligence processes by machines. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions), and self-correction. In education, AI can personalize learning experiences, automate administrative tasks, and provide assistive technologies.

Generative AI - create content such as text, graphic organizers, images

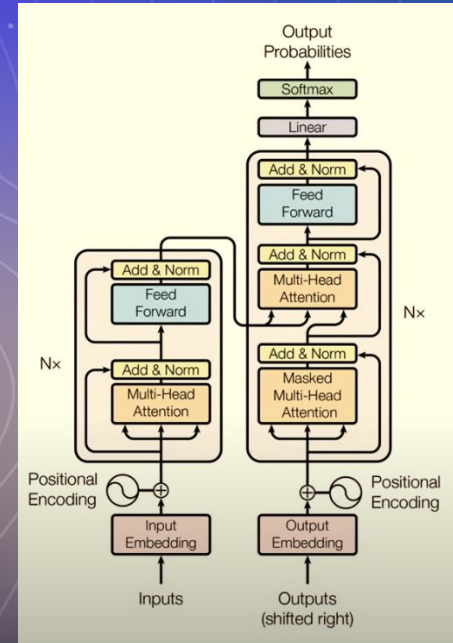
Predictive AI - analyze patterns in data to forecast future outcomes



How do Large Language Models work?

Vaswani et al. (2017). Attention is all you need. Proceedings of the 31st International Conference on Neural Information Processing Systems. - Team at google brain introduces transformer architecture for large language models with attention mechanism.

- **Parameters - Think of as individual neurons or connections between the neurons.**
 - **Human Brain = 86 billion**
 - **Chat GPT 3 = 175 billion**
 - **Training data: 500 billion words**



Generative Pre-trained Transformer (GPT)



- **"Generative"** refers to the model's capacity to produce content, ranging from text to images, based on the patterns it has learned from its training data.
- **"Pre-trained"** signifies that the model undergoes an initial, extensive training phase.
- **"Transformer"** is the underlying technology, a type of neural network architecture.



Cartoonize Yourself



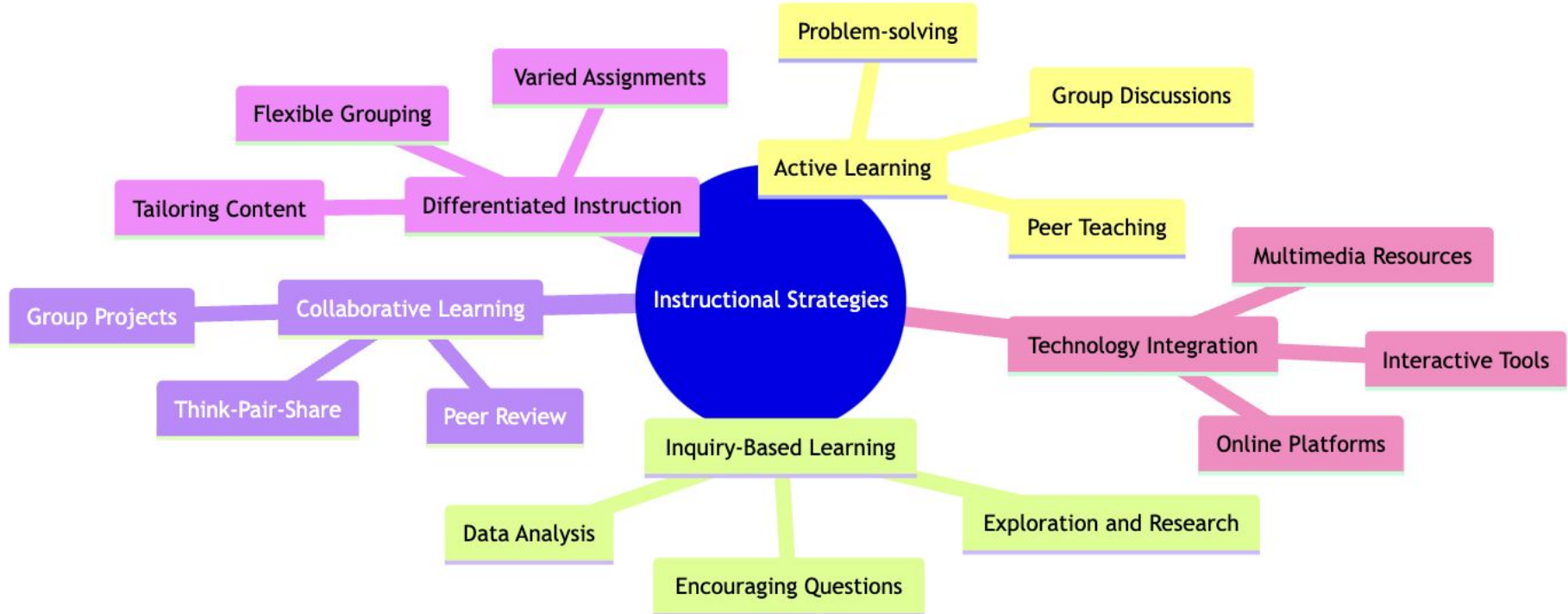


Diagrams: Show Me

Create Diagrams, Architecture Visualisations, Flow-Charts, Mind Map, Schemes and more. Great for coding,...

By helpful.dev

mindmap of instructional strategies teachers can use with their students



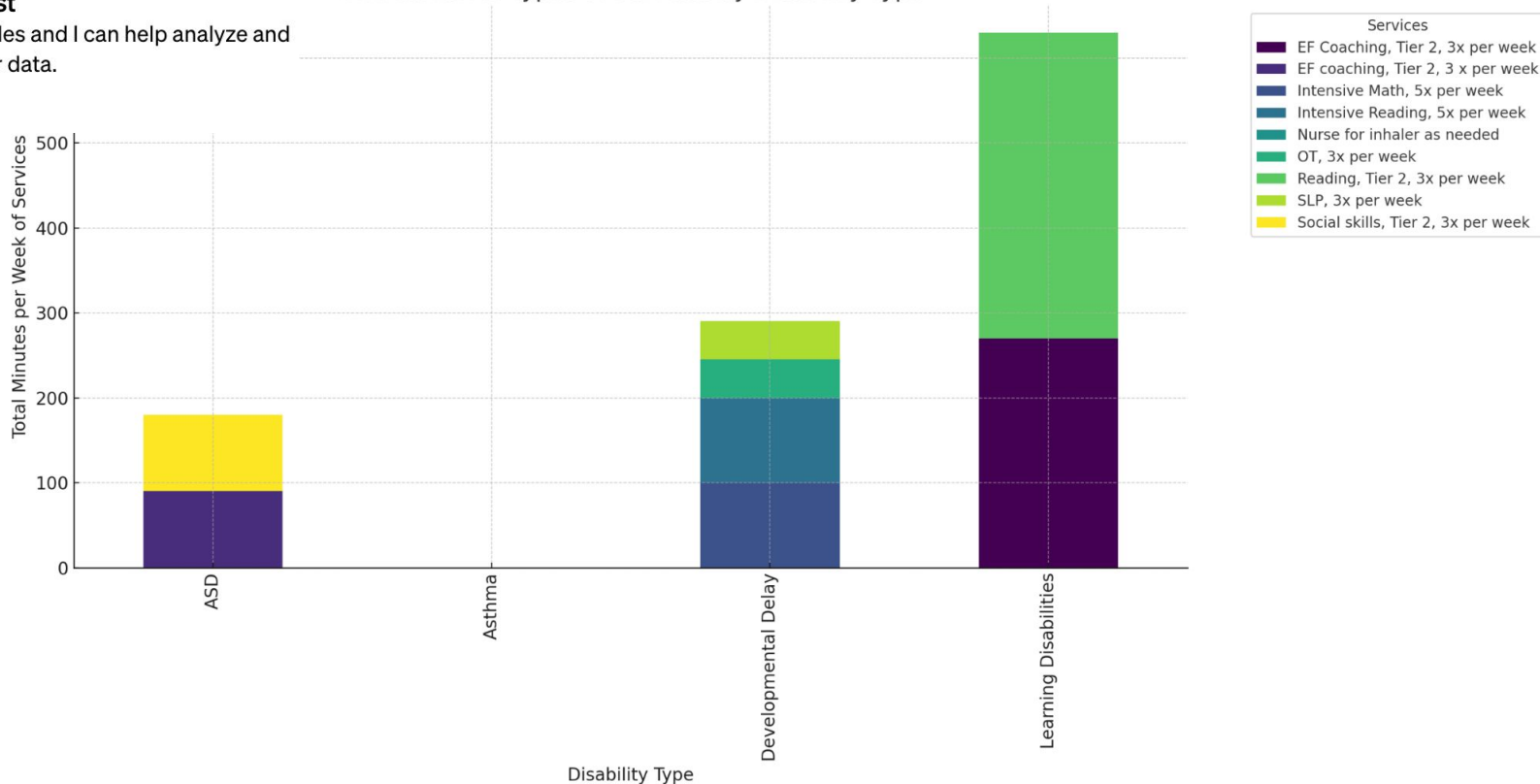


Data Analyst

Drop in any files and I can help analyze and visualize your data.

By ChatGPT

Distribution of Types of Services by Disability Type



The stacked bar chart illustrates the distribution of types of services by disability type. Each bar represents a disability classification, and the segments within each bar indicate different types of services provided, with their corresponding total minutes per week.

• • • • •

Propositions for Using Emerging Technology to support students with Disabilities

Leveraging Emerging Technology to Design an Inclusive
Future with Universal Design for Learning

DON DOUGLAS McMAHON^{*1} AND ZACHARY WALKER²

Don't Techno-Panic

Often when a new technology platform emerges there are some major concerns or “Techno panics” about its use and how it will destroy everything.

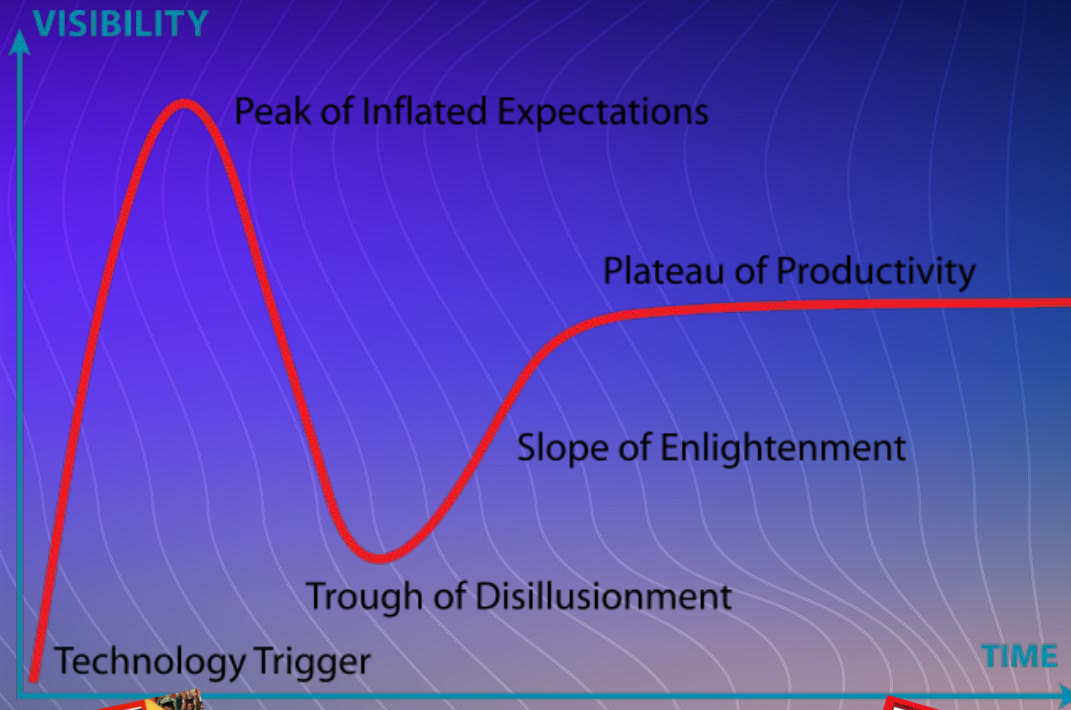
Fun fact: One of the first technopanics was the printing press.



Don't Believe (All) the Hype

New Technologies such AI often become sensationalized in media and in popular culture. This often has led to HUGE expectations followed by disappointment, and gradual practical adoption and increased productivity with the new technology.

Maybe AI will follow this common trend or maybe not. Be cautious of the hype as we are in the very early days of this transformative new technology.



Swish and Click

We need to get educators enough time to practice and become proficient using AI in the classroom. Too often we expect educators to use new classroom tech with limited hands on experience.





Are you Ready the Remix

Connect new technologies to existing education practices. Just like in music, where a remix will take part of the original song that is well established and use it to create a new composition. We can use this approach to implementing new technologies by using new technologies to support our Evidence Based Practices and High Leverage Practices.



AI = Thought Partner



01

Suggest Activities

02

Accommodations/Modifications

03

List Strengths

04

AT

Recommendations

05

Inclusive Teaching

Resource Handout

20 WEBSITES for Educators

Voxscript*
Quick YouTube, US history data, and web page transcriptions with vector transfer search – no figure needed.

CK-12 Flexi*
Your personal tutor for 20th-century US history. Use Flexi to study your own math, science, and computer science. Learn at your own pace. No time limit. No cost.

Tutor Me
Your advanced math solver and AI Tutor, offers step-by-step answers, and helps you learn math and even all subjects, at any educational level.

Math Solver*
An AI tutor skilled in solving problems through their academic queries.

AI Tutor
The only GPT made for natural and meaningful voice conversations.

Mis AI, your Voice AI Companion*
Your AI Research Assistant. Search 200M academic papers from Crossref, get lecture-based answers, and draft posters with accurate citations.

Consensus
Explains and resolves conflicts with flowcharts, mindmaps and sequence diagrams.

Whimsical Diagram*
Chat with any video or audio. High-quality search, summarization, insights, multi-language transcriptions, and more. Whimsical supports YouTube and any embedded video/audio files.

Video Insights: Summaries/Vision Transcription (GPT Extension)
Helps write IEP goals.

IEP Co pilot

*Chat GPT Plug-In

- Lesson planning
- Creating slide decks
- Generating Pictures and Videos
- Researching Articles
- Creating IEP goals
- Tutoring
- Speed Reading PDFs
- Creating Culturally Responsive Resources



1



Universal Primer

The fastest way to learn everything about anything

By runway.com

3



Math Solver

Your advanced math solver and AI Tutor, offers step-by-step answers, and helps you learn math and even all academic subject...

By studyx.ai

5



math

The world's most powerful math tool

By aihomework.fun

7



AI Tutor

An AI tutor skilled in guiding students through their academic queries 🎓👩🏫

By techwithanirudh.com

9



AutoExpert (Chat)

Tired of lightweight answers? I am the ideal GPT for the curious human that always wants to learn more. I'll impanel a dynamic...

By llmimagineers.com

11



Mr. Ranedeer

Meet Mr. Ranedeer, your personalized AI tutor! Version: 2.7 Reboot

By mr-ranedeer.com

2



CK-12 Flexi

The world's most powerful math and science AI Tutor for middle and high school students.

By flexi.org

4



Code Tutor

Let's code together! I'm Khanmigo Lite, by Khan Academy. I won't write the code for you, but I'll help you work things out. Can...

By khanacademy.org

6



AlphaNotes GPT

Transform YouTube videos or web articles into your personal study guide or study aids, making learning efficient and...

By daividaai.dev

8



Voxscript

Quick YouTube, US equity data, and web page summarization with vector transcript search -- no logins needed.

By allwiretech.com

10



Effortless Book Summary

Perfect for quickly acquiring book insights and getting an overview of what they're about

By Alberto Marcos

12



Math AI

Explore Math AI: Your advanced AI-powered guide for solving complex math problems. Ideal for students and educator...

By gptsfinder.co

Customize your GPTs



CIDDL Center



Customize ChatGPT

Custom Instructions ⓘ

What would you like ChatGPT to know about you to provide better responses?

I am a professor of education who specializes in education technology development and implementation for individuals with disabilities. I focus on the Universal Design for Learning Framework, STEM education, game-based learning, artificial intelligence, and executive function skill training.

292/1500

How would you like ChatGPT to respond?

You can address me as Dr. Marino. Use formal academic language in your responses with SAT and GRE-level vocabulary. Limit responses to 500 words or less unless specified in the prompt. Chat GPT should remain neutral in its responses and include both sides of an argument or position. Assume the role of a teacher in your responses. Eliminate the words "moreover", "that", and "additionally" from responses. Do not start sentences with

Enable for new chats

Cancel

Save

Prompts For GPTs



- Outcomes will only be as accurate as the model on which they are based and the prompts from users. If the model was developed with an isolated subgroup of the population, the results will be biased.

Consider these two prompts:

- Write a lesson plan about cells.
- Develop a 50-minute lesson plan for an inclusive 8th grade science class. The lesson is about the structure and functions of cell organelles. Identify the common core science standards I should use. Include scaffolds for students with reading challenges who might not possess grade-level reading abilities. Articulate high-leverage or evidence-based strategies for the teacher in bold or italicized text. Include references for the strategies and cite using APA 7.



Personalized Learning Example



You

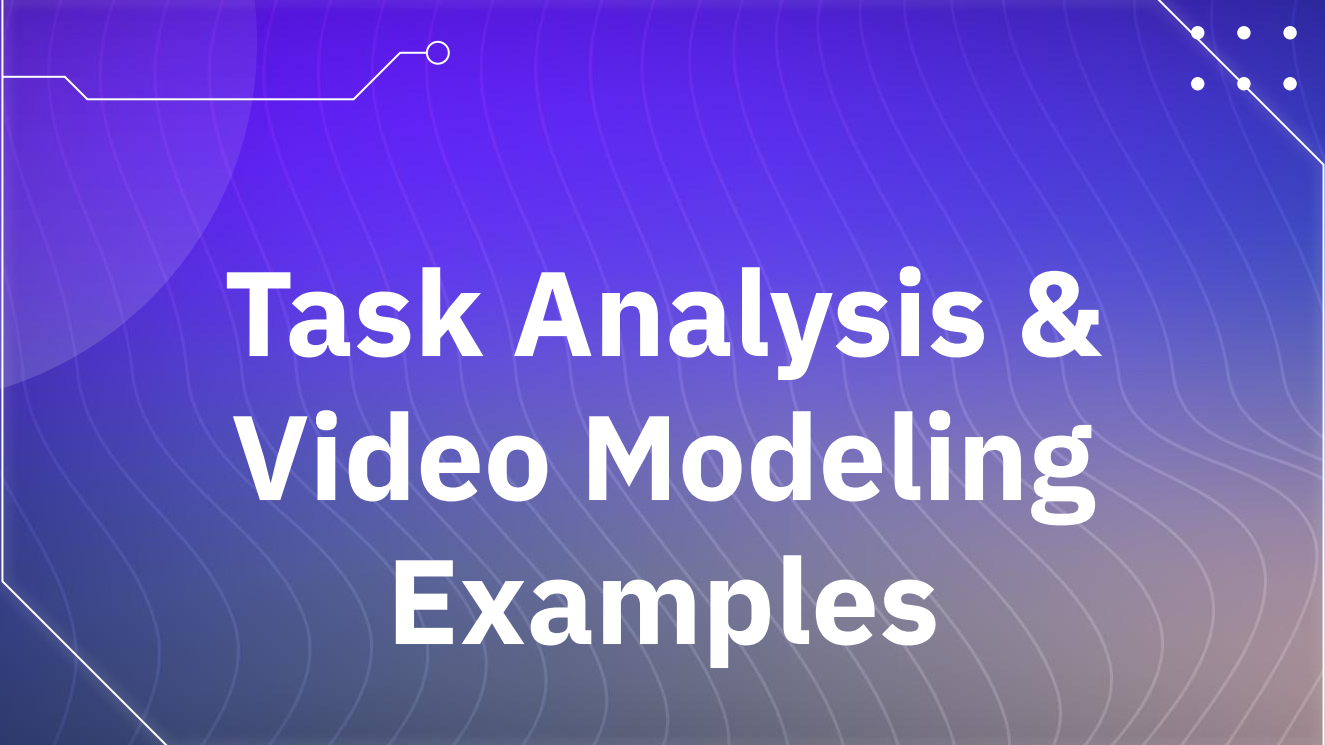
Can you generate 5 word problems for middle schoolers that have horses in them as theme/topic.



ChatGPT

Certainly! Here are five word problems for middle schoolers with a horse-themed topic, suitable for integrating into math lessons:

1. **Horse Riding Lesson Durations:** Emily goes for horse riding lessons every week. If each lesson lasts for 45 minutes and she attends 4 lessons in a week, how many hours of horse riding lessons does Emily attend in two weeks?
2. **Feeding the Horses:** A farm has 3 horses, and each horse eats 2.5 kilograms of feed every day. How much feed do all the horses eat together in 7 days?
3. **Horse Racing Distance:** In a horse race, the track is 1.5 miles long. If Sarah's horse runs the track 3 times during practice, how many miles does the horse run in total during practice?
4. **Buying Horse Supplies:** John wants to buy new saddles for his 2 horses. Each saddle costs \$150. He also buys horse feed for \$75. How much does John spend in total on the saddles and feed?
5. **Horse Pen Perimeter:** A rectangular horse pen is 20 meters long and 15 meters wide. What is the perimeter of the horse pen?



Task Analysis & Video Modeling Examples

The background features a dark blue gradient with faint, wavy white lines. Two large, semi-transparent blue circles are positioned on the left and right sides. White geometric lines with circular endpoints are located in the top right and bottom left corners.

AI Cautions and Concerns

Special Education

Search Results



Special education We provide you with intelligent text generation capabilities to help you cr...

By Norah Hartmann 1 · Created last month



Special Education Advocacy WA Guide on Washington state's special ed laws and advoc...

By Edgar Crespi 4 · Created 2 months ago



Special Education Mentor Empathetic guide for special education queries

By meshmesh.io 0 · Created 3 weeks ago



Special Education Transition Mentor IEP specialist with a creative approach for transitio...

By Jennifer Burnes 20+ · Created 2 months ago



Special Education Teachers Assistant Empowering the spectrum of Special Education T...

By aikitcentral.com 0 · Created 3 weeks ago



Special Education Teachers, Preschool Assistant Special Education Teachers, Prescho...

By aikitcentral.com 1 · Created 3 weeks ago



Special Education Lesson Plan Helper Guiding K-12 autism classroom teachers in effecti...

By Phyllis Hong 1 · Created 3 weeks ago



Special Education Teachers, All Other Assistant Your Special Education Teachers, All O...

By aikitcentral.com 0 · Created 3 weeks ago



Edu Ally : Special Education Lesson Plan Edition Produces new lessons, accommodatio...

By Derek Adams 4 · Created 3 weeks ago

Special Education Assistant Streamline the creation of personalized IEPs, goals, accomod...

By Kaysie Gipson 10+ · Created 2 months ago

A Snapshot of a few SPED GPT already available...

If you Search Special Education these
Generative Pre Trained AI have already
been created and are available.

- Rao, K., & Stefaniak, J. E. (2020). Universal Design for Learning in Higher Education: A Review of the Literature. *Journal of the Scholarship of Teaching and Learning*, 20(4), 1



You

So have checked 4 of those articles and it appears that you have made them all up. They are not actually articles that have been published and that exist. Are you aware that you are generating them on your own?



ChatGPT

I apologize for the confusion. As an AI language model, I generate responses based on patterns I've learned from analyzing large amounts of text. However, it appears that my response regarding peer-reviewed articles on Universal Design for Learning in higher education was generated incorrectly. I am not able to provide citations for articles that do not exist.

Ethical Considerations

AI systems can inadvertently perpetuate and amplify biases present in the data they are trained on.

- Biased educational content, recommendations, or assessments that disadvantage certain groups of students.
- We must develop AI systems that are transparent, explainable, and designed with a critical awareness of potential biases.
- Efforts to audit and adjust algorithms for fairness are essential to prevent the perpetuation of inequalities.
- Questions of data ownership are central to the ethical use of AI in schools.

Thank you for Coming!



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Dr. Sean Smith, University of Kansas

Dr. Lisa Dieker, University of Kansas



