

ChatGPT & AI in the Classroom: A Guide for Teachers



A **DITCH THAT TEXTBOOK** Guide

By Matt Miller (@jmattmiller)

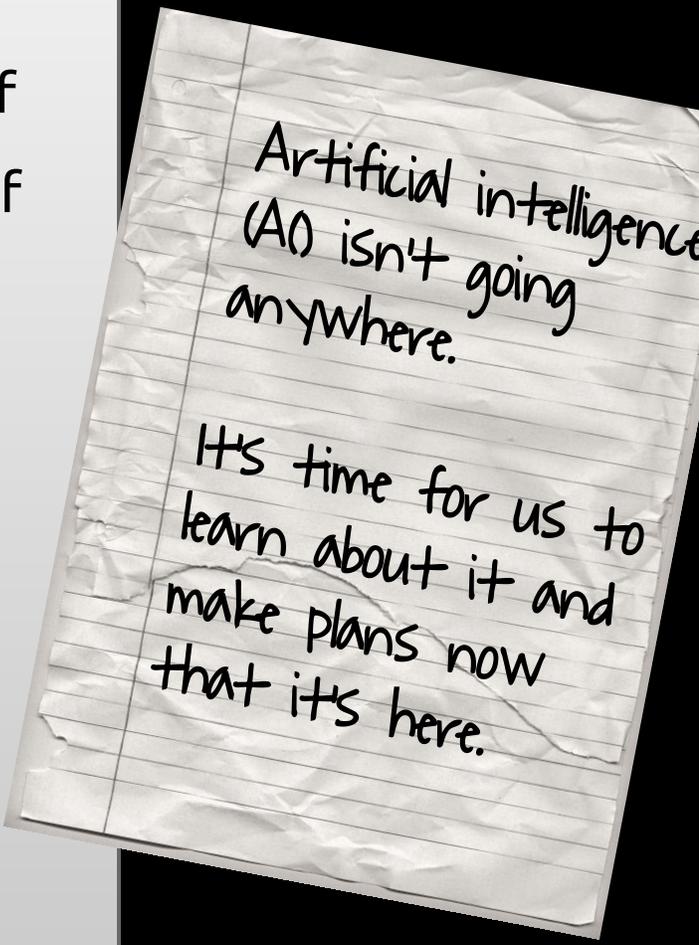
Let's make sense of AI in the classroom.

AI just stormed into the classroom with the emergence of ChatGPT, which brings up LOTS of questions ...

- How is it going to change teaching and education?
- How do we teach now that it exists?
- How can we use it?
- What should we do about it?

In this ebook, you'll find some definitions, some implications, and some ideas for using it all.

Matt



Artificial intelligence (AI) isn't going anywhere.

It's time for us to learn about it and make plans now that it's here.



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Some AI definitions

These are some of the important things to understand as we wrap our brains around what this is and how to navigate it in the classroom.

1. What is ChatGPT?

ChatGPT is an artificial intelligence chatbot. Drawing on tons and tons of data and massive processing power, it uses GPT3 technology to let users talk to the AI about practically anything.

It'll write you a song. Tell you a story. Make you a list of gifts to buy or reasons to do something.

It'll write your lesson plans. (Go ahead and try it!)

It'll even do your students' homework for them.



ChatGPT (chat.openai.com/chat) was released on November 30, 2022, the first very notable public AI chatbot. (It certainly won't be the last.)



For the purposes of information, let us have ChatGPT give us working definitions to use:

ChatGPT, what are you?

I am an artificial intelligence assistant trained by OpenAI to help answer questions and provide information on a wide variety of topics. I am not a physical being, but rather a program that is designed to process and generate text based on the input I receive. My primary function is to assist users like you by providing information and answering questions to the best of my ability. I have been designed to have a conversational style and can understand and respond to natural language input. I do not have personal experiences or feelings, and my responses are based solely on the information and knowledge that has been programmed into me. Is there anything else you would like to know?

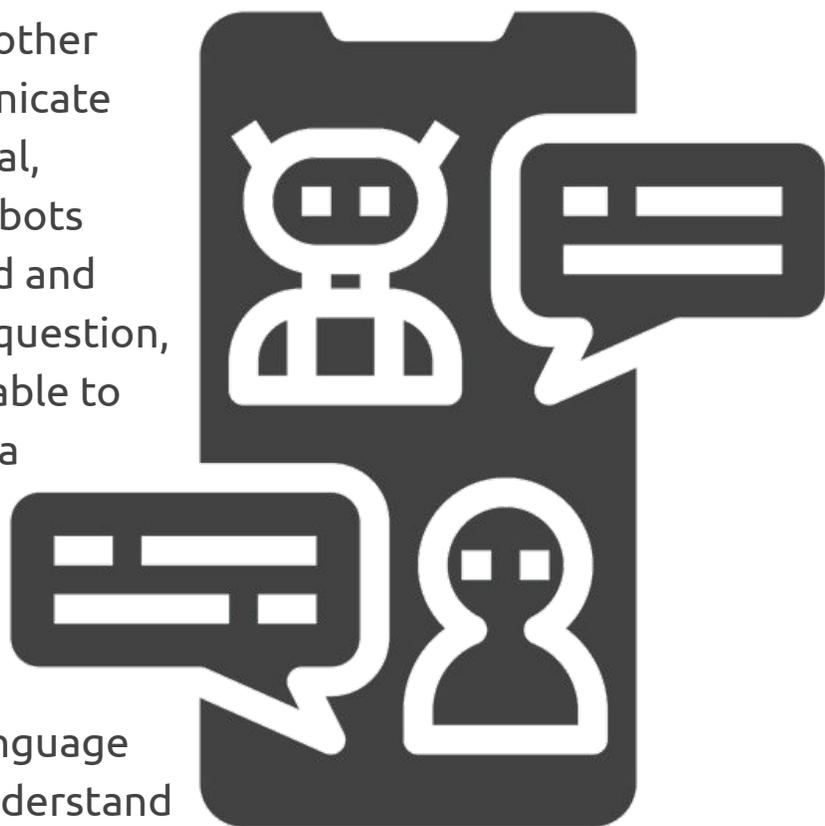
2. What is ChatGPT3?

GPT-3 (Generative Pre-trained Transformer 3) is a language generation model developed by OpenAI. It is a neural network-based machine learning model that is trained on a large dataset of text data to generate human-like text. GPT-3 has the ability to perform a wide range of language tasks, including translation, summarization, question answering, and text generation. It can be fine-tuned on specific tasks or used to generate text in a more general sense.



3. What is a chatbot?

A chatbot is a computer program designed to simulate conversation with human users, especially over the Internet. Chatbots are often used in customer service, marketing, and other areas where being able to communicate with customers or users in a natural, human-like way is important. Chatbots can be programmed to understand and respond to specific commands or question, or they can be more general and able to hold a conversation with users on a wide range of topics. They can be integrated into websites, messaging apps, and other digital platforms, and they can be programmed to use natural language processing (NLP) techniques to understand and respond to user input. Chatbots can be very useful for automating tasks and providing quick responses to frequently asked questions, but they are not as advanced as some other artificial intelligence (AI) systems and may not be able to hold more complex or nuanced conversations.





4. What is artificial intelligence?

Artificial intelligence (AI) refers to the ability of a computer or machine to perform tasks that would normally require human intelligence, such as learning, problem-solving, decision-making, and more. There are several different approaches to building AI systems, including machine learning, where a system is trained on a dataset and can improve its performance over time, and rule-based systems, where the system follows a set of predetermined rules to make decisions. AI can be applied to a wide range of areas, including natural language processing, image and video recognition, robotics, and more. The goal of AI research is to create systems that can perform tasks at least as well as, or ideally better than, humans. AI has the potential to revolutionize many industries and transform the way we live and work, but it also raises important ethical and social questions.



How ChatGPT can actually be a force for good rather than a boon for cheaters

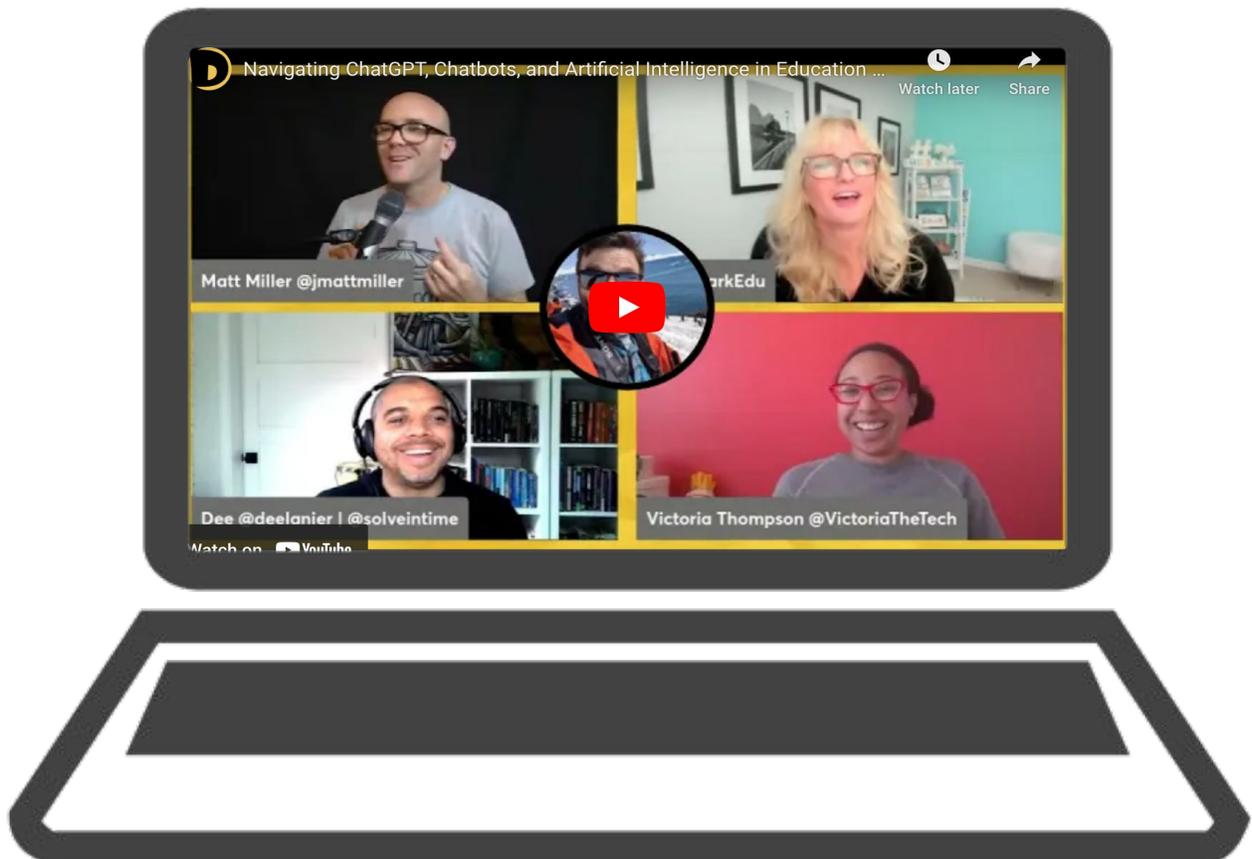
Educator says of ChatGPT: 'I think it'll bring an end to certain types of mindless, irrelevant, inauthentic learning activities.'

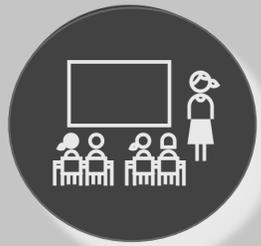
By **Matt Zalaznick** January 10, 2023



Want to make sense of the world of artificial intelligence and its impact on education? Sit in on the panel discussion in the video below, featuring:

- Victoria Thompson, Microsoft education executive and former classroom teacher
- Donnie Piercey, fifth grade teacher and 2021 Kentucky State Teacher of the Year
- Holly Clark, education consultant and National Board Certified Teacher (formerly in the classroom)
- Dee Lanier, author, speaker, and former classroom teacher
- Matt Miller, author/creator of Ditch That Textbook and former classroom teacher





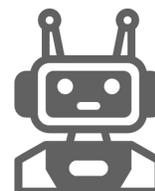
What are the implications for education?

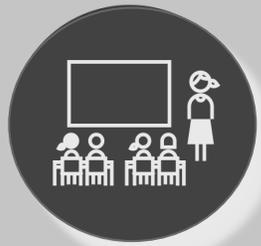
As soon as the genie was out of the lamp, so to speak, there were effects of ChatGPT and AI on teaching and learning. Whether we felt those impacts right away or not, as soon as it was released, things have the potential to change. Below, we'll talk about ChatGPT in particular, but know that this is just the first one ... and we're thinking long-term about new products to come later.

1. Students can use ChatGPT to do their assignments.

There. I'll just say it clearly and plainly since we're all thinking it. For lots of assignment types (not all of them!), students can ask ChatGPT to do the work for them. They can copy/paste the work into a document or your learning management system and submit it.

Read more: [Yes, Teachers, You Should Be Panicking About AI \(The Broken Copier\)](#) -- This post provides six reasons why we should be concerned about ChatGPT and AI (in light of the condition of education in many classrooms right now), helping us make sense of how we move forward.





2. TurnItIn and other plagiarism checkers can't catch it.

What ChatGPT creates is an original work each time you ask it. It creates something new every time you ask, and its responses are not in the databases of plagiarism checkers. ChatGPT doesn't keep a log of responses it creates, and even if it did, I'm thinking OpenAI (creator of ChatGPT) has no incentive to make all of that available to plagiarism checkers. (Even if it did, the processing power necessary to query that database would be enormous.)

Some people will, undoubtedly, try to find ChatGPT detectors to track down students using it (in a similar way to plagiarism checkers).

However, they can be wildly inaccurate.

Beware of using detectors as your way of dealing with this.

They're not reliable. And this approach isn't the long-term solution to helping your students become modern learners.



3. Schools and districts will try to block it, but that won't stop much.

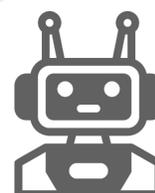
Immediately, IT admins are going to have to decide if they want to block ChatGPT with their internet firewalls. And lots of them will indeed block it. If they do, I hope they don't think that they've solved the "problem" they think they have on their hands.

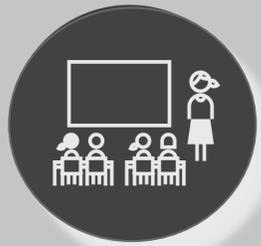
First of all, blocking ChatGPT on the school's network won't do much. Sure, students won't be able to access it with their school devices on the school network. But did you know that students have cell phones? Phones that operate on a cellular network that the school can't control? They can run to the bathroom, sit in a stall, ask ChatGPT for answers, copy them to a document, come back to class, and transfer the text on that document into their assignment and turn it in. (They can do that at home, too. Or on the bus. Or quietly under the desk in the classroom.)

Whether to block ChatGPT school-wide is still a decision schools and districts have to make.

The bigger decision is: what will teaching and learning look like going forward now that this technology is available?

Read more: [What can English teachers do about ChatGPT \(Learning in Room 213\)](#) – This post explores what ChatGPT is, the problems with blocking it, and suggestions: entice personal engagement, avoid formulaic assignments, build critical thinking, etc.



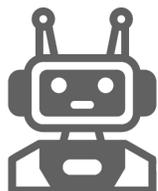


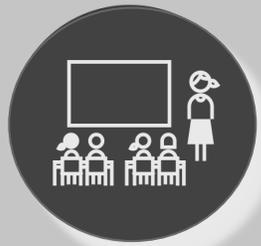
4. ChatGPT and forthcoming chatbots like it have their limitations.

When you load ChatGPT for the first time, it even tells you what some of its limitations are. Here are a few that it states -- and some others to be aware of for schools/classrooms:

- It may occasionally generate incorrect information. As of publication of this post, it's still in "free research preview." That means it's an imperfect product that they're trying to improve.
- It may occasionally produce harmful instructions or biased content. Any artificial intelligence is as good as the dataset it's drawing from -- and how it uses it. It has to make judgment calls just like humans do. Bias exists in judgments. It's still learning how to work with and eliminate its bias.
- It has limited knowledge of world and events after 2021. Think of its dataset in a sealed box. It isn't drawing from current events. It can't pull anything from social media. It can't even search the active internet.

Read more: [AI Homework \(Stratechery\)](#)
-- This is an interesting, thoughtful, nuanced look at the intersection of homework and artificial intelligence. He talks about the struggles that ChatGPT has with math, and he even runs a virtual machine (like a Linux terminal) inside ChatGPT.



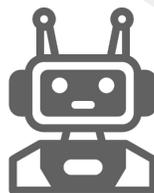


5. School/class uses of ChatGPT, chatbots, and AI aren't all bad.

Lots of teachers are making judgment calls about the use of this new technology, and many are concerned about its immediate impacts. Here's the truth: it'll make lots of teachers reconsider some types of assignments they'll assign going forward. Hey, they don't want to know how a bot will respond to their prompts, questions, and assignments. They want to use it to gauge learning in a human being. It makes sense.

But let's put it this way. There are some really, really mindless, terrible writing prompts out there ... and math worksheets ... and project assignments. If we're looking long-term, this technology will eventually start to push some of those terrible assignments out and force us to come up with something new. It'll probably be painful, and many of us will probably hate parts of the process. But in the end, we will evolve to something better.

Read more: [No, ChatGPT is Not the End of High School English. But Here's the Useful Tool It Offers Teachers \(Forbes\)](#) -- Here's the best point in this whole article (so you don't have to read it): ChatGPT is an excellent prompt tester. Think you've come up with a good writing prompt? Feed it to the chatbot. If it can come up with an essay that you would consider a good piece of work, then that prompt should be refined, reworked, or simply scrapped.





6. Students will have to learn how to navigate life with AI.

Big picture, this is a shift students will deal with for the rest of their lives. Artificial intelligence will continue to get better and better. This version of ChatGPT is the weakest, most rudimentary artificial intelligence of its kind our students will ever use. My friend Holly Clark called it the "Commodore 64 of AI" -- a technology that was revolutionary at the time but is now seen as antiquated and obsolete.

Students will have to wrestle with questions of humanity -- what sets us apart as humans? When should AI be used, and when shouldn't it be?

They'll wrestle with questions of obsolescence -- what can I do that AI can't do? How can I do my best to be sure my work, my passions, my place in this world isn't replaced by artificial intelligence?

They'll wrestle with ethical questions -- how can AI use be fair, equitable, unbiased, good? What happens if it gets in the hands of bad actors? How can I make sure I'm using it in an ethical way?



20 ways to use ChatGPT in the classroom

1



Use it as a more complex source of information than Google.

2



Use it to provide students access to lots of good examples.

3



Use it to remix student work.

4



Ask it for definitions (on a variety of levels).

5



Ask it for feedback for student work.

6



Ask it to do some teacher tasks for you.

7



Add it to the "think pair share" thinking routine.

8



Grade the bot.

9



Debate the bot.

10



Ask the bot for advice.

11



Use it to summarize texts.

12



Use it for insight into big, difficult-to-solve problems.

13



Ask ChatGPT to write your lesson plans.

14



Anticipate the response you'd expect from AI.

15



Take several responses and make a better product.

16



Create personalized learning experiences.

17



Provide tutoring or coaching.

18



Generate prompts and questions to facilitate discussions.

19



Provide information and answer questions.

20



Supplement in-person instruction.



DITCH THAT TEXTBOOK

Get an overview of ChatGPT in the classroom at ditchthattextbook.com/ai.
Infographic by Matt Miller (@jmattmiller / DitchThatTextbook.com)



1. Use it as a more complex, nuanced source of information than Google.



During conversations with students and in-class discussions, we can ask ChatGPT (and other tools like it) to provide us the information we need to drive a conversation forward. The bot's response isn't the first and last word in the conversation. Rather, it just provides details that we can use to discuss a topic.

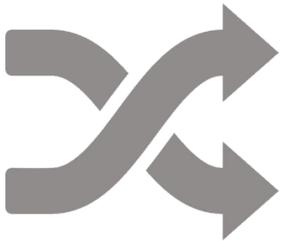
2. Use it to provide students access to lots of good examples.



Artificial intelligence can give students unlimited good examples. (Note that I didn't say "great" examples, but "good.") Ask it for an essay about a certain topic. Then ask it again and it'll give you something different. Then ask it again. Then ask for a slightly different version, specifying something you'd like to see. When it's time for the student to create something of their own, much like an artist or musician, the student will draw from the examples they've seen.



3. Use it to remix student work.



Students create something for class: a story, an essay, a poem, a recap of something they've learned. Then, they can ask ChatGPT (or a similar tool) to remix it for them.

[See Donnie Piercey's example in this video.](#)

4. Ask it for definitions (on a variety of levels).



If you need a concept explained or defined, ChatGPT (or a similar tool) can provide that explanation -- and do it in as detailed or simple a manner as you'd like.

On episode 99 of the Partial Credit Podcast, Jesse Lubinsky shared that he asked for a definition of "faith" in terms a child would understand. That helped me realize that it can give definitions, descriptions, and explanations -- we expected that -- or it can level them up or down in complexity however we ask.



5. Ask it for feedback for student work.



Lots of edtech tools are letting us get feedback to students more quickly -- whether automated or through direct communication with a teacher or classmate.

ChatGPT (or a similar tool) can be another source of feedback. When students finish a written work, they can copy/paste their work into ChatGPT and ask how they can improve their writing.

6. Ask it to do some teacher tasks for you.



Ask ChatGPT (or a similar tool) to write some lesson plans for you. Or some questions for a quiz. Ask it for some jokes about your content so you can slip those into class. Of course, you don't have to use everything that it provides you verbatim. But it might give you a starting point you can modify .



7. Add it to the "think pair share" thinking routine.



I love this line of thinking from Sarah Dillard (Twitter: @dillardsarah), and [if you click on this link](#) and look at the whole thread, she explains it more. Students think about a prompt, then discuss it with a classmate. Then they do any searches they want on ChatGPT. They pair back up to discuss what they've found. Then they share with the class.

8. Ask it to do some teacher tasks for you.



This idea comes from [Jen Giffen \(@VirtualGiff\)](#). Give a writing prompt to ChatGPT (or a similar tool). It could be a different writing prompt than you'll give your students. Read the essay that the bot creates for you.

Then, give the students the rubric you'll use to grade them and ask them to grade the response from the artificial intelligence.



9. Debate the bot.



This idea comes from [Jen Giffen \(@VirtualGiff\)](#).

Let students (as individuals, in pairs or small groups, or even as a whole-group activity) debate ChatGPT (or a similar tool).

Students take one side of a debate. The AI takes the other. Students plug their points in and ask the bot to rebut.

It gives them low-stakes practice -- and as much practice as they want -- to hone their debate skills.

10. Ask the bot for advice.



This idea comes from [Jen Giffen \(@VirtualGiff\)](#).

A bot can't be a replacement for counseling or medical help. But we do take advice from friends, family ... even strangers sometimes. If students are struggling with just about anything, they can get advice from this artificial intelligence -- an AI that's working with much of the entirety of the internet as its dataset.



11. Use it to summarize texts.



If a text that your students are reading is in the dataset of ChatGPT (or a similar tool), they could always try to ask it for a summary of the whole thing -- or of certain chapters, sections, acts, scenes, etc. This is what we used SparkNotes and Cliff's Notes for years ago. Of course, SparkNotes and Cliff's Notes were controversial in the past -- "if they read those, they'll never read the text!" -- but eventually we found ways that they could support learning, too.

12. Use it for insight into big, difficult-to-solve problems.



If you -- or your students -- come up with a math or science problem bigger than you know how to solve (or don't want to take the time to solve), ask ChatGPT (or a similar tool).

If it can solve it, it'll show you an answer. But, more importantly, you'll gain some insight into the process of solving it. And even if it can't solve it, it'll tell you why.



You could also ask it bigger societal questions to see what it would say. I asked it how to solve world hunger, and here's what I got:



how do you solve world hunger



Eliminating world hunger is a complex and multifaceted challenge that requires the efforts of governments, international organizations, and individuals around the world. Some strategies that have been proposed to address this issue include: 👍 👎

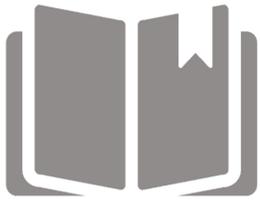
1. Increasing agricultural productivity: This can be done through the use of advanced technologies such as precision farming and genetically modified crops, as well as by improving infrastructure and access to education and training for farmers.
2. Reducing food waste: Up to one-third of all food produced in the world is lost or wasted, which represents a significant opportunity to increase food availability. Reducing food waste can be achieved through better storage and transportation systems, as well as by increasing awareness about the issue.
3. Improving distribution systems: In many cases, food is available, but it is not distributed effectively to those who need it most. Improving distribution systems, including supply chains and transportation networks, can help get food to the people who need it.
4. Promoting economic development: Economic growth can lead to increased food production and greater access to food, as well as the resources and infrastructure needed to address food insecurity.
5. Providing emergency food aid: In times of crisis, such as during natural disasters or armed conflict, providing emergency food aid can help prevent starvation and malnutrition.

Ultimately, addressing world hunger will require a combination of these and other approaches, as well as strong political will and sustained commitment from governments and other organizations.

Regenerate response

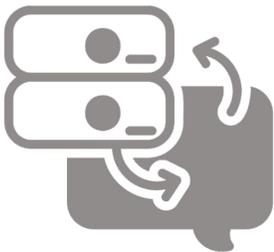


13. **Ask ChatGPT to write your lesson plans.**



ChatGPT CAN write your lesson plans for you. Again, it's all about asking the right questions. Take a curriculum standard and ask it to write a lesson plan for you. Then modify it to meet the needs of your class. It won't be perfect but it will give you a good start if you're looking for ideas or need an outline.

14. **Anticipate the response you'd expect from AI.**



If your students have been studying a topic, this could be a great retrieval / brain dump activity -- and a way of ranking the importance of all the things they've learned about the topic.

Tell them that you're going to ask ChatGPT (or a similar tool) to summarize what they've been studying. Ask them what they think the bot will say. It'll prompt them to recall knowledge from their memory.



15. Take several responses and make a better product.



Ask it to answer a question or write something for you. Then ask it again ... and again ... and again. Get five (or more!) versions of the same prompt.

Have students (individually, in pairs/small groups, or even ask a class) take the best parts from those versions and turn it into a better final product.

16. Create personalized learning experiences.



Response from ChatGPT to "How can AI be used to help teach in the classroom?"

AI can be used to create personalized learning experiences for students by adapting the content and pace of instruction to each student's needs and abilities. This can be achieved through the use of adaptive learning software, which adjusts the material based on the student's performance.

Source: ChatGPT via chat.openai.com (2022)



17. Provide tutoring or coaching.

Response from ChatGPT to "How can AI be used to help teach in the classroom?"



AI can be used to provide one-on-one tutoring or coaching to students, either in person or remotely. This can be particularly useful for students who may not have access to human tutors, or for subjects that are difficult to teach in a traditional classroom setting.

Source: ChatGPT via chat.openai.com (2022)

18. Generate prompts and questions to facilitate discussions.

Response from ChatGPT to "How can AI be used to help teach in the classroom?"



I can be used to facilitate discussions among students by posing questions and prompts that encourage critical thinking and encourage students to engage with the material in a deeper way.

Source: ChatGPT via chat.openai.com (2022)



19. Provide information and answer questions.

Response from ChatGPT to "How can AI be used to help teach in the classroom?"



I can be used to provide students with information on a wide range of topics, and to answer their questions on those topics. This can be particularly useful for subjects that may be difficult to understand or that require a lot of background knowledge.

Source: ChatGPT via chat.openai.com (2022)

20. Supplement in-person instruction.



Response from ChatGPT to "How can you (ChatGPT) be used to help teach in the classroom?"

I can be used to supplement in-person instruction by providing additional resources and materials for students to explore on their own, or by offering additional support and assistance outside of the classroom.

Source: ChatGPT via chat.openai.com (2022)

Looking for more ideas?



Check out the Ditch That Textbook blog!

Head over to

DitchThatTextbook.com

to browse articles, search for specific topics or check out the different pages available. You'll find new articles about a wide variety of topics related to creativity, technology and innovation.

About the author

Matt Miller taught in public schools for more than 10 years, teaching all levels of high school Spanish. In his career, he planned nearly 12,000 class lessons. He taught more than half a million instructional minutes. And he graded work for nearly 2,000 days of class. He's an award-winning author of five books. Matt is a Google Certified Innovator, Microsoft in Education Expert, and two-time Bammy! Awards nominee. His Ditch That Textbook blog encourages tens of thousands of educators in more than 100 countries to use technology and creative ideas in teaching. Connect with Matt via email

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Bring Matt to your school/event!

Teachers leave Matt's keynote speeches, workshops, and sessions **empowered, energized, and equipped** to level up their teaching in class tomorrow.

In 7+ years, he has worked with educators in 40+ states and 6 countries (in-person and virtually). He's presented keynotes, workshops, and sessions at **more than 300 events** at schools, school districts, and conferences.

He's been sought out by companies like **Google, Microsoft, Samsung, Viewsonic, Adobe, Cisco**, and more.

*"Matt was awesome and just what our district needed. He was an **engaging, dynamic and relatable** presenter." – Director of Student Achievement*

*"Since his presentation, we have received many comments from staff regarding how they are using the technology ideas in their classrooms. Many are using it as part of the curriculum planning for next year, while others have **already started using the programs in their current classrooms.**" – Director of Curriculum and Instruction*

*"Matt Miller is ahead of the game! He has incredible insight into engaging students in ways that are **FUN!** His **energy level is off the chart**, and he interacted with our staff on a personal level." – Principal*

More information: Email hello@ditchthattextbook.com for availability, details, and pricing.

