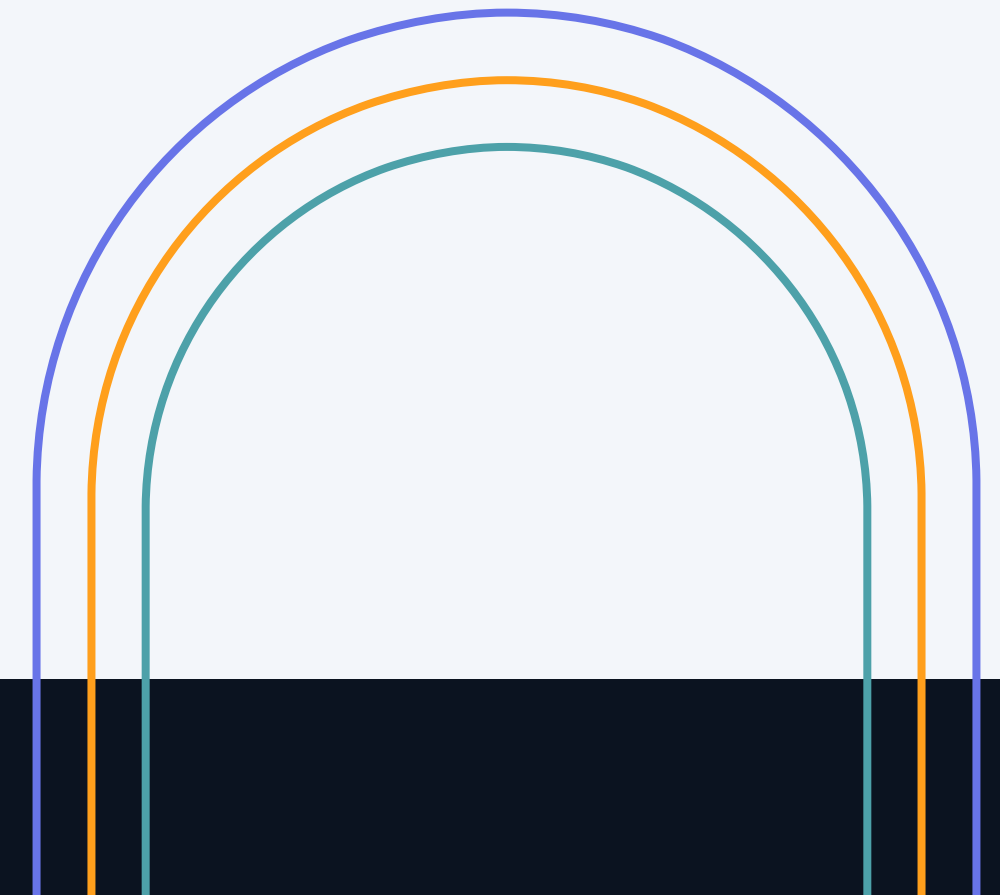




NSSA Conference

How Can Language Technology Empower Tutors?

Dora Demszky



ChatGPT has blown up the education world

CLASSROOM TECHNOLOGY OPINION

What ChatGPT Means for How We Teach Writing

Existential dread? More personalized writing assignments? What to make of the new AI tool

By Anne Bruder — January 04, 2023 ⌚ 4 min read

‘I’ll just stop grading’: Students, faculty reflect on ChatGPT after computer science course turns to paper exams

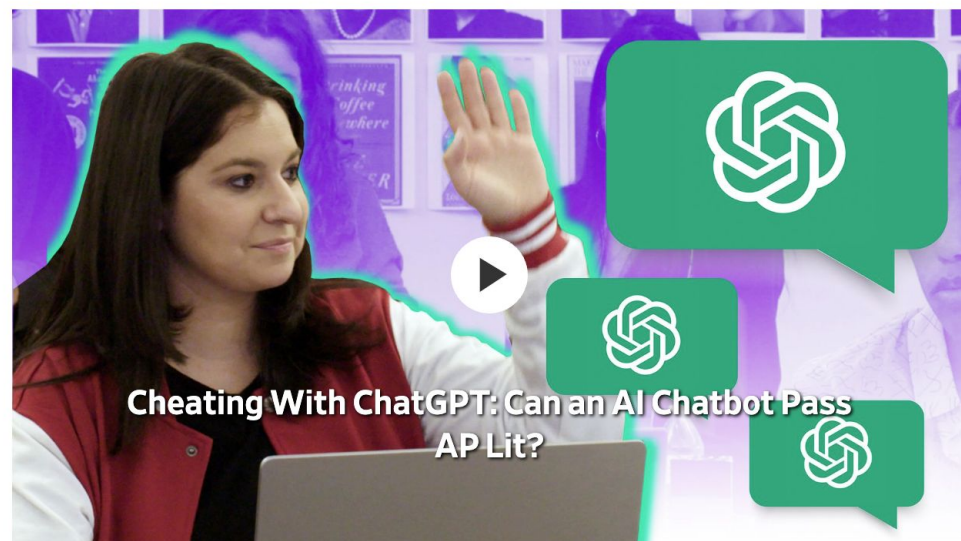
Students and faculty discussed how ChatGPT may change how homework assignments are completed and how students are assessed.

by [Charlotte Hampton](#) | 2/7/23 5:10am [f](#) [t](#)

TECH | PERSONAL TECH | PERSONAL TECHNOLOGY: JOANNA STERN

ChatGPT Wrote My AP English Essay—and I Passed

Our columnist went back to high school, this time bringing an AI chatbot to complete her assignments



Cheating With ChatGPT: Can an AI Chatbot Pass AP Lit?

ChatGPT, OpenAI's new artificially intelligent chatbot, can write essays on complex topics. WSJ's Joanna Stern went back to high-school AP Literature for a day to see if she could pass the class using just AI. Photo illustration: Elena Scotti



By [Joanna Stern](#) [Follow](#)

Dec. 21, 2022 9:00 am ET

AI bot ChatGPT stuns academics with essay-writing skills and usability

Latest chatbot from Elon Musk-founded OpenAI can identify incorrect premises and refuse to answer inappropriate requests

... and also raised new challenges

The Stanford Daily

News • Science & Technology

Scores of Stanford students used ChatGPT on final exams, survey suggests

Did a Fourth Grader Write This? Or the New Chatbot?

Don't be surprised if you can't always tell. Neither could a fourth-grade teacher — or Judy Blume.

By Claire Cain Miller, Adam Playford, Larry Buchanan and Aaron Krolik Dec. 26, 2022

TECHNOLOGY

The College Essay Is Dead

Nobody is prepared for how AI will transform academia.

By Stephen Marche

SOFIA BARNETT CULTURE JAN 30, 2023 1:21 PM

ChatGPT Is Making Universities Rethink Plagiarism

Students and professors can't decide whether the AI chatbot is a research tool—or a cheating engine.


ARTIFICIAL INTELLIGENCE

Why detecting AI-generated text is so difficult (and what to do about it)



Plus: AI models generate copyrighted images and photos of real people.

By Melissa Heikkilä

February 7, 2023



Current discussions have
overlooked a powerful application
for supporting educators.





What is central medium
of instruction?





What is central medium
of instruction?

**Teacher-student
discourse**





New Knowledge


Foster a culture of curiosity.

Growth Mindset



Help students embrace challenge as an opportunity for growth.

Feeling of Belonging

Creating a nurturing community.



How do we empower the **key expert** — the **tutor** in what they do?



- Not scalable: requires expertise, consistency, regularity
- Usually not personalized, evidence-driven, nor adaptive

Can we complement these approaches using AI?

Challenges of conventional tutor training



Automated feedback powered by NLP

Talk Move

Building On Students' Ideas ⓘ

23

+ Talk Move Moments

Week	Talk Move Moments
Week 1	11
Week 2	16
Week 3	23
Week 4	
Week 5	
Week 6	

↑ 30% more moments than last week

↓ 13% fewer moments than peer Section Leaders

Talk Time

Category	Percentage
You	75%
Students	25%

Your session had **23 moments** when you built upon students' ideas.

Tips to Improve this Talk Move

- Ask a student to clarify or elaborate on their response.
- Follow up a student comment by pointing out why it is useful or helpful to the discussion.
- Refer back to a student's idea later in class ("As _____ mentioned earlier....").

What did you do well for this Talk Move and what are some things you want to do differently to improve?

I encouraged the students to ask more questions. I also pushed the class to answer the questions together without me revealing the answers.

Share with the other SLs ⓘ

Submit

What did other Section Leaders say?

I helped my students to push their critical thinking while solving the code!

John

Prev Next

Your Talk Moves In Action

Section Leader 00:31:14 🔊

That's that's I think that's 1 one common confusion. A lot of people think. How can I put a beeper if I haven't picked one up yet? And answer is, you don't have to pick up a beeper to put a beeper down. The problem didn't require it. But there are other problems where you have to put a beeper, so that's one common. Is Are there any other things that people found little confusing when they were doing this. And you very much, Nina. Who else would like to mention? You know

Reflect 💡

Select a moment when curiosity was exhibited in your class! ⓘ

Explore and select moments from the transcript given below.

Search words/time

Section Leader 00:00:00 🔊

Hello! Glad to see someone. Someone found me there. It looks like I see that you are still connecting to audio hopefully. You're not having any problems there. I see you muted. Can you unmute just to check your mic.

Ashlee 00:02:43 🔊

Good morning.

Section Leader 00:02:45 🔊

Good morning. Thank you very much.

Ashlee 00:02:49 🔊

It's morning. Oh, Greece. Wow! Okay, cool. I'm very happy to meet you. Very happy to meet

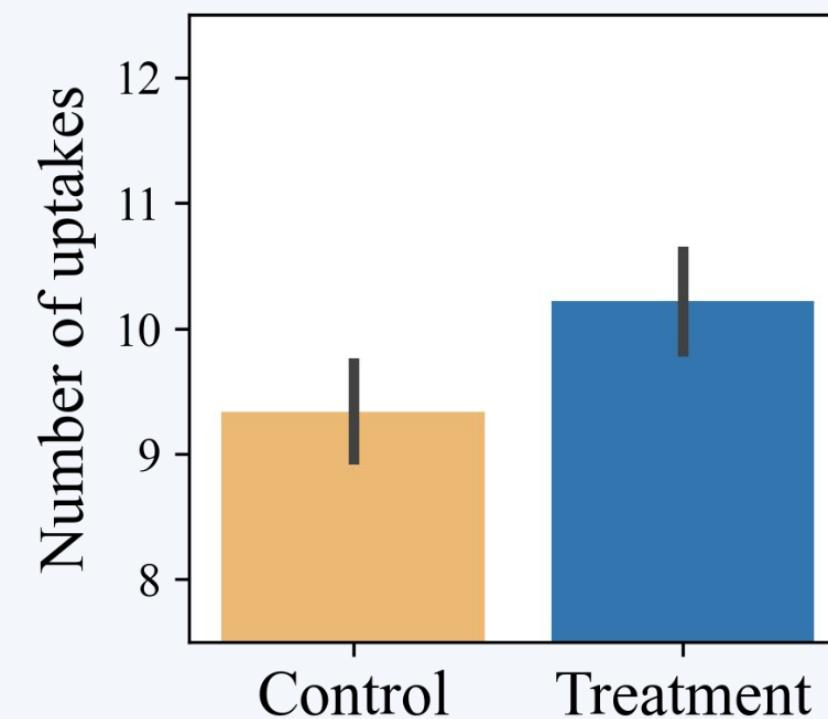
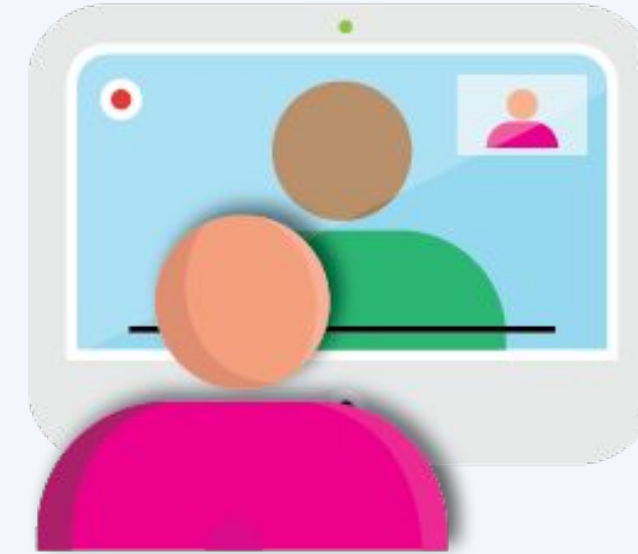
Automated feedback improves instruction & student outcomes!

Teachers...

- take up student ideas 16% more
- ask 14% more questions
- gave 2% higher course ratings

Students...


- talk 6% more
- are 7% more likely to submit assignments
- gave 4%-20% higher course ratings
- feel more optimistic about their academic future!



How can tutors use AI to improve?


Practice Teaching w/ Simulated Students

1



I'm stuck with [...]


This is indeed a difficult problem. Can you walk me through your code?




Real-time Suggestions

2

Incorrect.




You're on the right track, but when we write 40 hundred, we actually mean 40 x 100. Do you want to try again?



Post-Teaching Feedback

3



↓



What can we measure?

- ❖ Uptake of student ideas
- ❖ Funneling vs focusing questions
- ❖ Student reasoning
- ❖ On vs off task instruction
- ❖ Punitive vs restorative behavior management
- ❖ Praise
- ❖ Accountable talk moves
 - Eliciting student ideas
 - Building on student ideas
 - Connecting ideas



Ethical use



Bias

- Involve expert teachers from a diverse backgrounds in each step of the research process
- Ensure that the training data represents the target population

Ground truth?

- Incorporate ambiguity and intersubjectivity into the model
- Rely more on extrinsic rather than intrinsic (ground truth) evaluation

Privacy

- De-identify data
- Tools should be private to teacher
- Oversight of data use

Team & Partners



Mei Tan



Rose Wang



David Yeager



Jing Liu



Heather Hill



Carly Robinson



Candice Penelton



Chris Piech



Susanna Loeb



thank you!



resource

page

Use these design resources in your Canva Presentation. Happy designing!

Don't forget to delete this page before presenting.

