

**New York City Schools Ban  
ChatGPT Amid Cheating Worries**

**-CNET**

*Alarmed by A.I. Chatbots, Universities  
Start Revamping How They Teach*

**-New York Times**

**Professor catches student cheating  
with ChatGPT: 'I feel abject terror'**

**-New York Post**

**ChatGPT and the Death of Education**



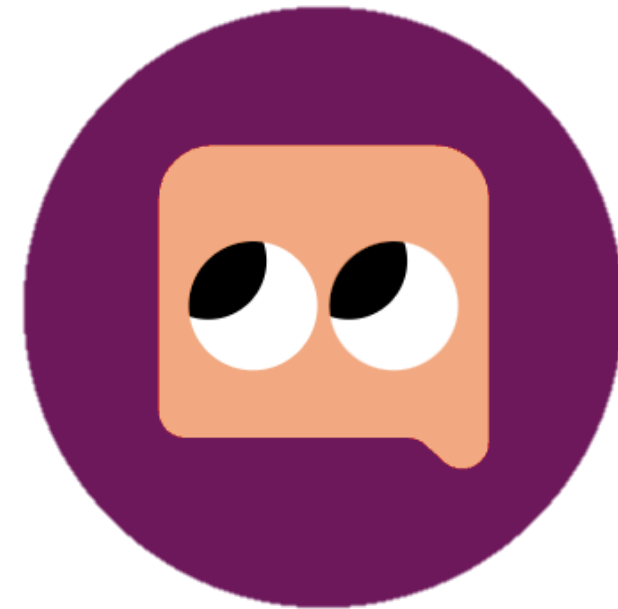
# Khanmigo

“It’s able to divine what is probably the misconception in that student’s mind...”

–Sal Khan



**Khan  
Academy**



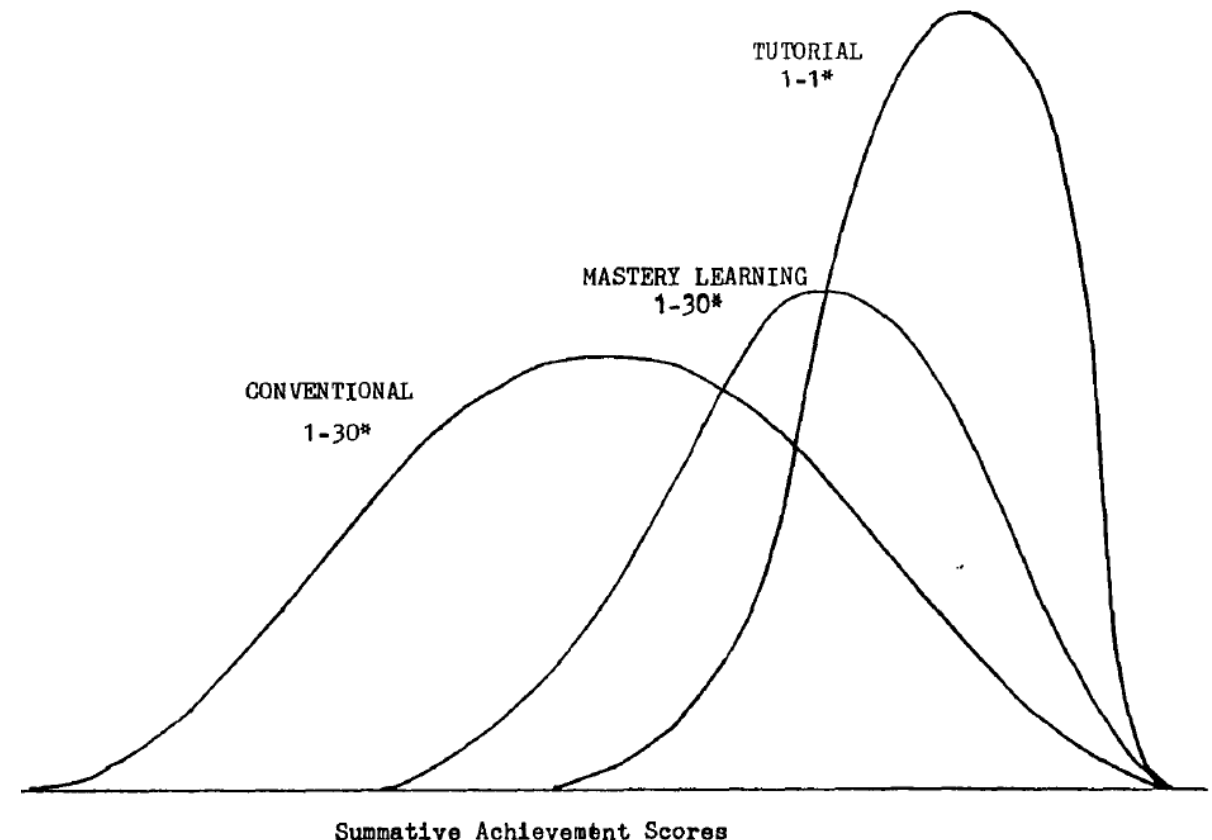
# Agenda

- Overview of Khanmigo
- Evaluation based on DOMS Rubric
- Demonstration



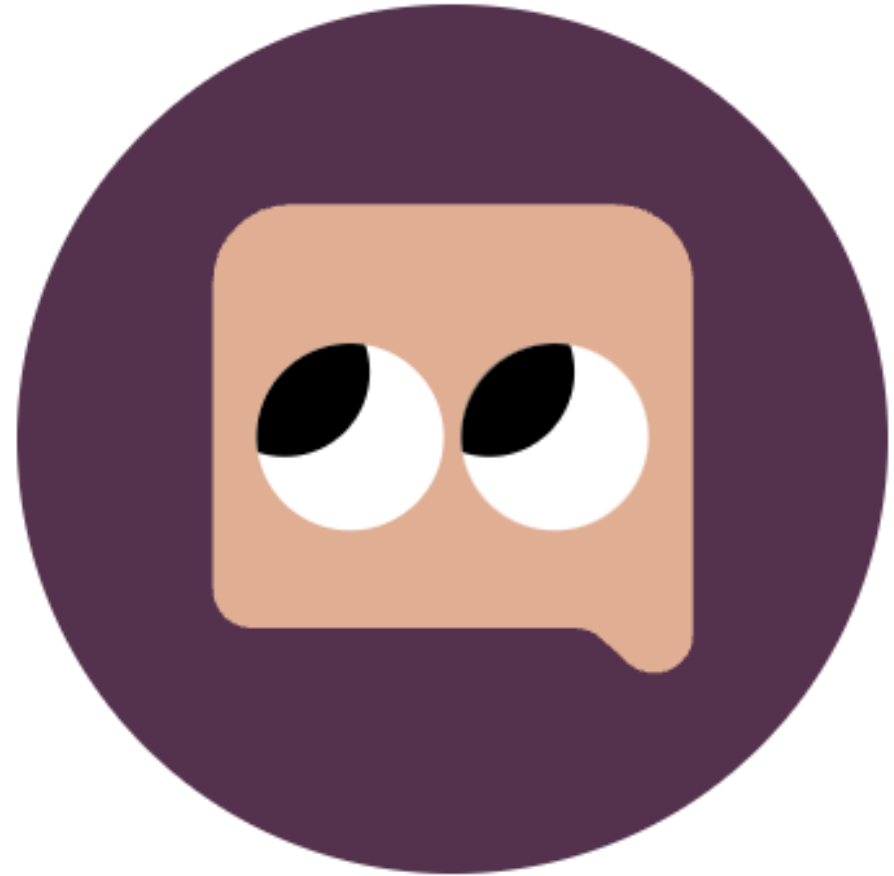
# Summative Results from 3 instruction methods

- **How to bring the effectiveness of one-to-one instruction to group learning?**
  - Students who received one-to-one tutoring performed two standard deviations (or "2 sigma") better than those in conventional classroom settings.
  - Tutored students scored higher than about 98% of students in a traditional classroom environment on the same assessments.
  - The "2 sigma" improvement represents a significant increase in learning effectiveness, highlighting the substantial impact that personalized tutoring can have on student achievement.



Let's look at the big picture

# Overview



Can you help me create a 6th grade geometry lesson plan?



### Solving for X using Graphs: Olympic Runners

#### Warm-up

If two Olympic runners are racing each other, how can we determine who wins using a graph?

#### Practice Questions

Runner A:  $x = 2t + 1$   
Runner B:  $x = t + 33$

- At which point do the two runners meet on the graph? (Point of intersection)
- Who is ahead at the 5-second mark? (Calculate the position of each runner at  $t = 5$ )

Khanmigo

What topic would you like to explore in your lesson plan? Try something like "Add fractions with common denominators"

Amazing, I'd like to includes topics that cover surface area word problems

Type message



Yes! Let's dive into it!

Hi, I'm Khanmigo! Ask me anything

Can you help me solve this?

# A 24/7 tutor for your child



"Falling in love with Khanmigo. I tried Chat GPT, for my daughter but this is what I was looking for. Really love the explanation and steps, it's like I am teaching her."

PARENT

## Khanmigo Student Discount!



**Moderation warning**  
This interaction with Khanmigo has been flagged by Khan Academy's moderation system.



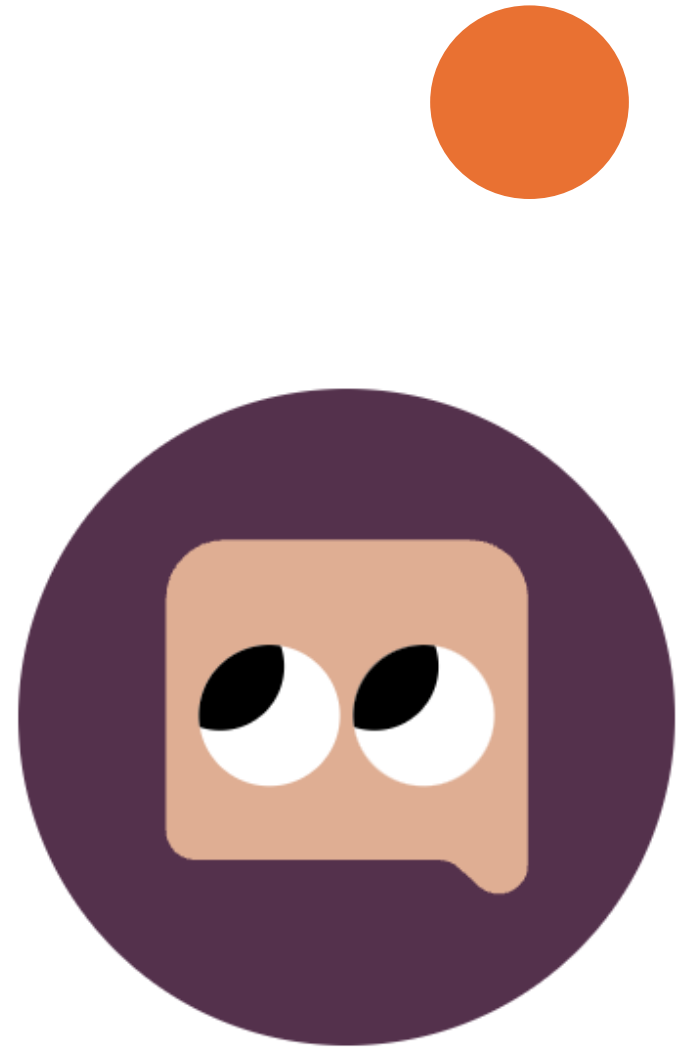
# Features & Capabilities

An AI-powered personal tutor and teaching assistant

Integrated Khan Academy's comprehensive content library

Parents can access their children's chat history and receive alerts about inappropriate interactions

Can use audio to receive input and output responses in the same media, with a "real" voice.



# Application to Educational Context

## Aligned with the constructive aspects of learning

- Emphasizing the development of problem-solving skills and
- Critical thinking

## Does not hand out answers

- Engages learners in the discovery process
- Creates an environment that encourages active participation and independent learning,
- Helps students to develop the skills they need to thrive in the age of artificial intelligence

## Personalized education

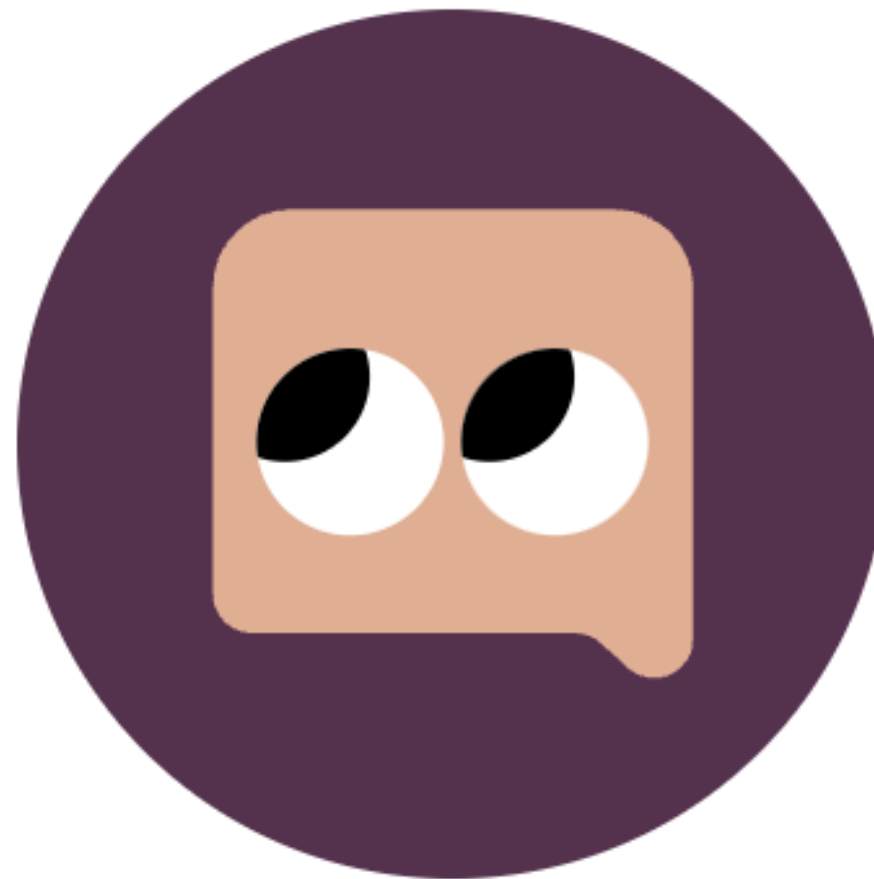
- Pedagogical tools that allow for repeat practice and
- Encourage a growth mindset by learning at own pace and skill level





Using the DOMS Rubric

# Evaluation



# Pedagogical Quality (5/5)

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- Khanmigo promotes:
  - engagement,
  - active learning,
  - problem-solving tasks,
  - provides effective feedback
  - assessment mechanisms.



Help me create a story about a kid who wanted to explain to his friends how to use khanmigo.ai

Oh, what a splendid idea! A tale of a young hero sharing the magic of Khanmigo with his friends! Let's dive right in.

How about we start with the first two sentences? Here's a suggestion: "Once upon a time, in a bustling city full of skyscrapers and parks, lived a curious boy named Sam. Sam had recently discovered a fascinating new friend, Khanmigo, a chatbot from Khan Academy, designed to offer immediate assistance while learning."

Now it's your turn! What happens next? Maybe you could describe how Sam feels about his discovery or how he plans to share it with his friends.

# Reliability & Ethics

## (4/5)

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- **Quality of Data**
  - Modified version of GPT4 with a persona and trained on pedagogy and the Khan Academy's content.
- **Objectivity & Fairness**
  - Designed to guide learners in finding answers themselves.
- **Transparency:**
  - Ability for parents and educators to monitor interactions.

Ah, the magic of machine learning! 🎓 🐼 Khanmigo is powered by OpenAI's GPT-4, a state-of-the-art language model. But it's not just any old model, oh no! It's been carefully adapted to fit right into the Khan Academy learning environment.

Think of it like this: GPT-4 is a brilliant actor who can play any role, but for Khanmigo, it's been given a very specific part to play: a tutor. It's been trained on a diverse range of internet text, but it's also been fine-tuned with Khan Academy's content and practice exercises.

And of course, safety is paramount! 🛡️ Khanmigo has guardrails in place to keep the conversation on-topic and educational, ensuring a safe and productive learning environment for students and teachers alike.

# Data Privacy & Security (4/5)

- Given its association with Khan Academy, it is likely that Khanmigo has robust data protection policies.
- However, without specific data security and privacy details, it is assumed to have room for minor improvement.

When it comes to Data privacy and security, Khan Academy would score quite high on the DOMS rubric. Here's why:

- 1** Data Collection: Khan Academy collects only the necessary data to provide a personalized learning experience. They don't collect any unnecessary personal information.
- 2** Data Storage: They use advanced security measures to ensure the data is stored safely.
- 3** Data Usage: Khan Academy uses the data to enhance the learning experience of the students. They don't sell any personal data.
- 4** Data Sharing: Khan Academy only shares data with teachers and parents linked to the student's account to track their progress. They don't share data with any third parties.
- 5** Data Destruction: When a user deletes their account, Khan Academy ensures that all personal data is deleted from their servers.

So, based on these points, Khan Academy would score quite high on the DOMS rubric for data privacy and security.

# Accessibility & Inclusion (4/5)

- Khanmigo is designed to be inclusive, offering features that promote diverse educational needs and minimize bias.
- This is suggested through its diverse set of features that cater to different learning preferences.
- Users may interact only by using their voice and receive auditory feedback.



Ah, the question of accessibility and inclusivity, a cornerstone of any educational tool! 🌐

As for Khanmigo, it strives to be as accessible and inclusive as possible. Here's how:

- 1** Language Support: Khanmigo can communicate in multiple languages, making it accessible to a diverse range of learners.
- 2** User-Friendly: It's designed to be easy to use for all ages and skill levels.
- 3** Encourages Learning: Khanmigo never gives direct answers, instead, it guides users to find the answers themselves, fostering a growth mindset.

# Scalability & Adaptability (4/5)

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- With tools to plan lessons, assess student work, and accommodate up to ten children on a parent's account, Khanmigo demonstrates adaptability.
- Enterprise solution for Khanmigo includes full districts which also demonstrates scalability.

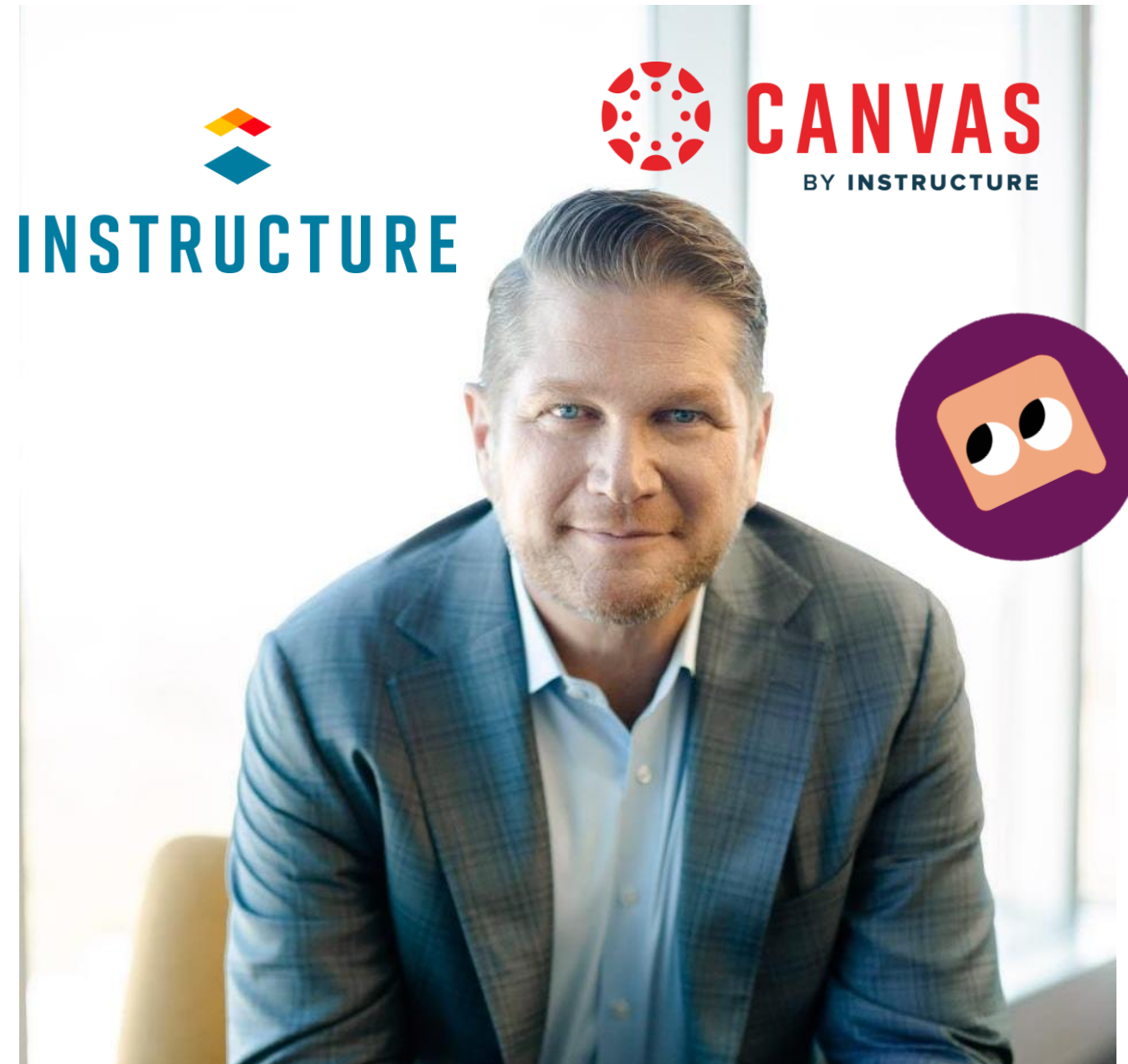


# Ease of Integration (4/5)

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- It accompanies the existing Khan Academy ecosystem, so the assistant can be used within any lesson, and it automatically takes in account the context of the problem being solved.
- Khanmigo will integrate with Canvas to offer an integrated solution within the LMS which demonstrates scalability.

<https://www.prnewswire.com/news-releases/instructure-and-khan-academy-announce-partnership-to-enhance-teaching-and-learning-with-khanmigo-the-ai-tool-for-education-301887202.html>



## Ease Cost-effectiveness of Integration (4/5)

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- Priced at 4/month or 44/year for teachers and given its comprehensive features and the value it provides, Khanmigo could be considered cost-effective.
- It appears to offer significant educational benefits in relation to its cost.
- Families can add all their kids to a single account.
- For districts it is in beta testing stage.

KHANMIGO FOR FAMILIES

**\$4/month**

\$44/year **1 month free**

KHANMIGO FOR TEACHERS

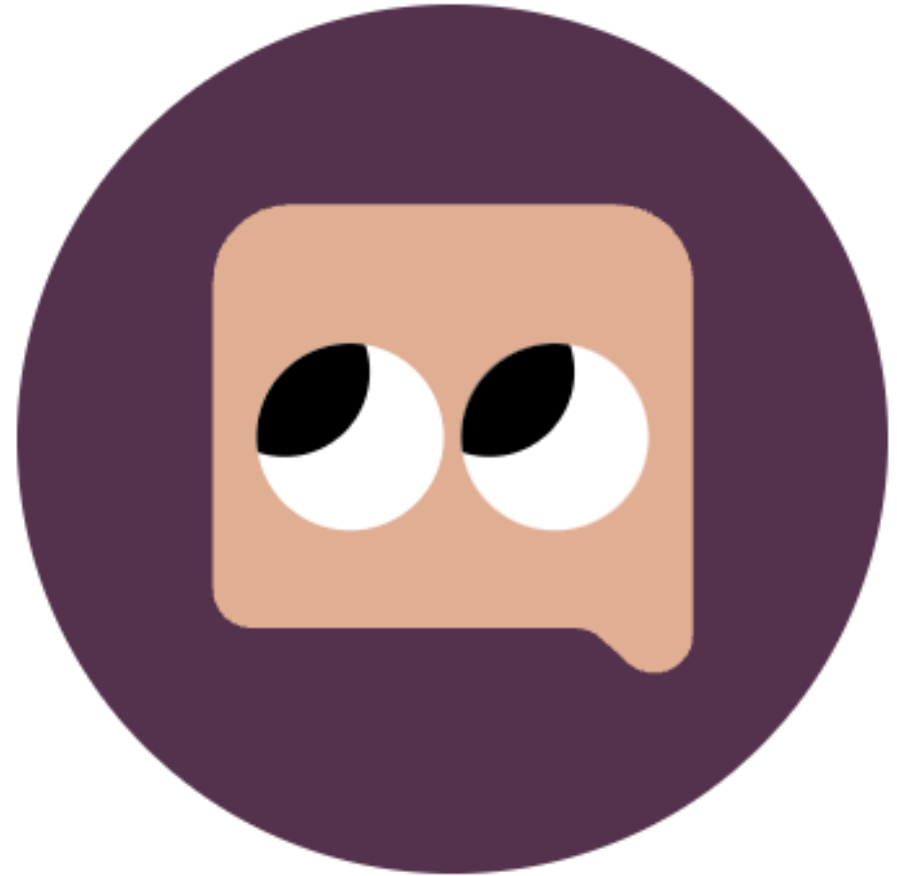
**\$4/month**

\$44/year **1 month free**





# Demonstration



# Writing Tools



Write

Give feedback on my academic essay

NEW



Craft a story



Brainstorm an admissions essay



Check for problems in my admissions essay



They were super excited to get access and when they went home they started using the tool to learn and improve their knowledge and grades. The end.



Ah, what a delightful ending! The students rushed home, eager to explore the wonders of Khanmigo. They spent hours diving into the depths of knowledge, their minds expanding with each new discovery. Their grades improved, and they found themselves falling in love with learning. A truly magnificent conclusion to our tale! 🥰

Now, in the real world, students can indeed use Khan Academy to enhance their learning. They can create an account, select their grade level, and choose the subjects they wish to study. As they progress, they can complete assignments set by their teachers and track their progress. It's a fantastic tool for both teachers and students!

I hope our storytelling adventure has been as enjoyable for you as it has been for me. Did this answer your question? If so, shall we embark on another narrative journey?

[Leave feedback](#)



# Debate



## Debate

Debate: Elementary school topics and beyond >

Debate: Middle school topics and beyond >

Debate: High school topics and beyond >



You're spot on! Cell phones can be like mini-computers in our pockets, helping us to look up information quickly. And yes, you could even use Khanmigo on your phone! Khanmigo is designed to offer immediate assistance while working on Khan Academy content, offering tailored support during your learning journey. It's like having a tiny tutor in your pocket! 📱 🎓

But here's a twist: while cell phones can be helpful, they can also be a distraction. Imagine trying to focus on a lesson while your phone is buzzing with notifications. It's like trying to read a book in the middle of a party! 🎉 📖

What do you think about the distraction factor?

[Leave feedback](#)

Rate this response



True. That could be a down side... so what to do?



Great question! It's like having a cookie jar in the room. Yummy, but can be distracting, right? 🍪 😊 One solution could be to have rules about when and how cell phones can be used in the classroom. For example, teachers could allow students to use their phones for specific tasks, but ask them to put them away at other times. It's like saying, "You can have a cookie, but only after dinner." What do you think about that?

[Leave feedback](#)

Rate this response



Rules can make it work... but the temptation could be substantial... Maybe implementing consequences if rules are not followed?



Bingo! It's like having a rule that if you eat a cookie before dinner, you have to do an extra chore. 🍪 ➡️ ✍️ Consequences for not following the rules can help students understand the importance of using their phones responsibly. But remember, the goal isn't to punish, but to teach responsibility and self-control. It's all about learning to enjoy our cookies at the right time! 😊



So, do you think this approach could work in a real classroom?


[Leave feedback](#)

Rate this response





# Demo Video

Khanmigo <sup>BETA</sup> Craft a story  


Khanmigo makes mistakes sometimes. [Here's why](#) 

Now, in the real world, Khanmigo is still in the early stages of testing. So, only students who attend a school that has opted into a district-wide agreement or those who are being homeschooled by their parents can have access to Khanmigo. Teachers outside of the pilot districts and homeschool parents can explore the Khanmigo teacher tools, but they don't have the ability at this time to enable Khanmigo for their students.



But let's get back to our story! How about we imagine that Sam's school is one of the pilot schools? So, the next day at school, Sam and his friends could ask their teacher about getting access to Khanmigo. What do you think happens next?

[Leave feedback](#) Rate this response  


Well I dont know... Can you give me some ideas?

 Of course, my dear friend! Let's see... How about this? The next day at school, Sam and his friends approach their teacher, Mrs. Johnson, with a request. "Mrs. Johnson, we've heard about this amazing tool called Khanmigo. It can help us with our school tasks and even speak out loud to us in English! Can we have access to it?"



Now, Mrs. Johnson, being a forward-thinking educator, is intrigued. She promises to look into it and get back to them. The anticipation builds as the students wait for her response. Will she be able to grant them access to Khanmigo? What do you think happens next?


[Leave feedback](#) Rate this response  







She called IT to investigate more about this... She did not know if she had to pay for it.

 Ah, the plot thickens! "Mrs. Johnson, always one to do her due diligence, called the school's IT department to investigate more about Khanmigo. She was unsure if there was a cost associated with it and wanted to make sure she had all the information before making a decision."

Now, in reality, Khanmigo is a free tool provided by Khan Academy. But let's keep the suspense going in our story! How do you think the IT department responded? And what happens next in our adventure?

[Leave feedback](#) Rate this response  

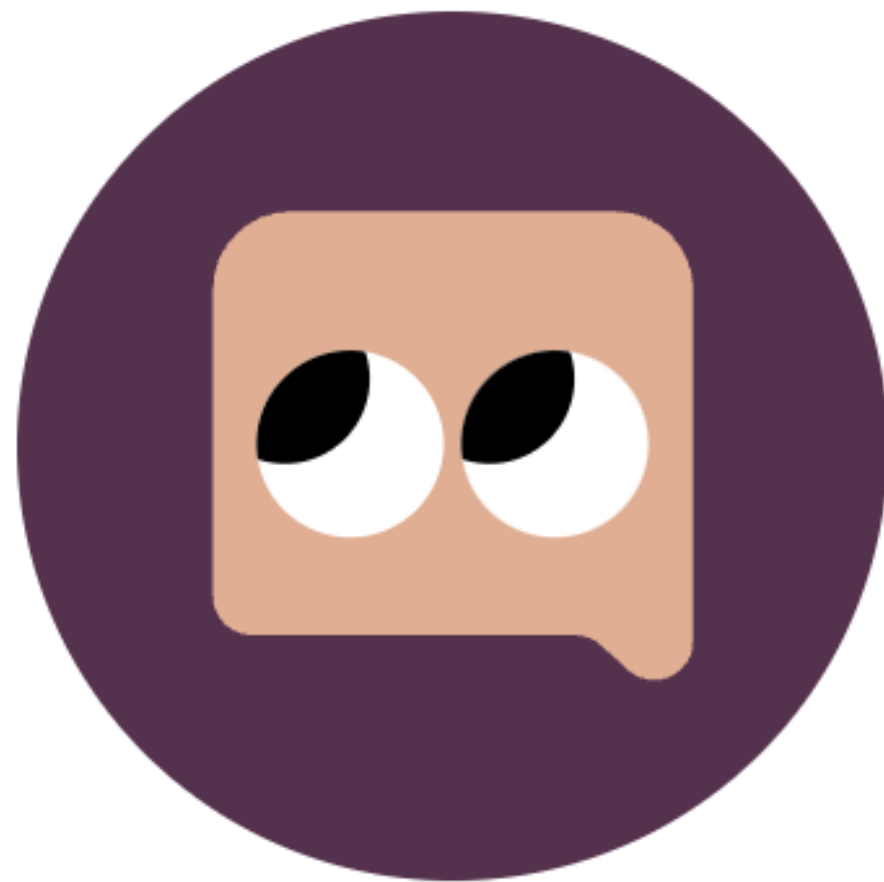
Well... They mentioned that she could give them access... But I dont know how the students received their users an| 

Do NOT share any personal data. This chat is logged. You can view in your [chat history](#).



# Extras



# How AI Could Save (Not Destroy) Education

## Sal Khan | TED



- Sal Khan discusses the potential for AI to revolutionize education by providing personalized tutoring to every student and assisting teachers.
- He showcases Khan Academy's AI, Khanmigo, which can enhance learning in various subjects like math, computer programming, and literature.
- The AI engages students in interactive exercises, offers feedback, and helps them improve their skills without replacing human teachers.
- Khan emphasizes that AI can be a powerful tool to enhance education, offering personalized guidance and support to students and educators alike.
- TED Videos. (2023, May 1). *How AI Could Save (Not Destroy) Education | Sal Khan | TED*. <https://www.youtube.com/watch?v=hJP5GqnTrNo>

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