Khan Academy Khanmigo AI tutor

IMPLEMENTED 2023–2026 · EDUCATION · US · BAND E · PARTLY PROVED
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Khan Academy offered its AI tutor, Khanmigo, to students from 2023, but students used it less than Khan Academy had hoped. A two-year randomised trial found it added no measurable gain beyond Khan Academy's own practice, and Khan Academy has rebuilt its district platform with the tutor built in.

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NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

No measurable effect: tested, no effect.

AI used: Generative AI tutor and teaching assistant (Khanmigo), built with early access to OpenAI's GPT-4.

Implemented: 2023–2026. Grade: band E, No measurable effect, Partly proved.

Headline result, as reported: Two-year randomised trial: students used Khanmigo on about a third of practice days, and gains matched Khan Academy practice without AI (2026)

1 · The case

The facts, as reported by the 5 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Khan Academy. US nonprofit education provider whose online lessons and practice are used by students and school districts. It launched Khanmigo, an AI tutor and teaching assistant built with early access to OpenAI's GPT-4, in 2023. Canvas block: 3. Customers and proposition. Also 4. Operations and process, 6. Data and technology.

Business challenge

The challenge. Khan Academy wanted to give every student an AI personal tutor. In 2023 its founder said AI could bring the biggest positive transformation education had ever seen, per Chalkbeat. Khan Academy also says students told it the platform was sometimes a bore and

Who implemented it

OpenAI (Model or cloud provider): Gave Khan Academy early access to GPT-4, used to build Khanmigo.
In-house (In-house): Khan Academy: built Khanmigo and rebuilt the district platform around it. The trial was run independently by researchers from the University of Toronto and Charles River Associates.

Technology (SEAM pillar E)

SEAM types: T1 Chat assistants, T3 API integrations. Deployment: Not reported. Vendors and products: OpenAI, Khanmigo, GPT-4.

Where it was built in: Built into Khan Academy's online practice. In the trial version students opened it in a separate tab; in the rebuilt platform it appears inside practice after a wrong answer.

What changed

Before: Khanmigo sat beside Khan Academy's content in a separate tab that students had to choose to open. After: Khan Academy rebuilt its district platform with Khanmigo built into practice. Measured effect of the AI tutor itself in the trial: no gain beyond Khan Academy practice without AI. [1] [2] [3] [4] [5]

What it cost

Not reported

What it saved

Not reported [1] [2] [3] [4] [5]

Governance and control

Khanmigo was configured to coach rather than give answers. Sal Khan said his organisation went to great lengths to protect student data, make chatbot conversations safe and prevent cheating, per The Hechinger Report. Schools can now turn the assistant off. An independent randomised trial measured its use and effect. Accountable owner: Not reported.

S2 · Accountable owner · Not reported
Not reported.

A1 · Safe use · Claimed
Sal Khan said his organisation went to great lengths to protect student data, make chatbot conversations safe and prevent cheating; schools can turn the assistant off. [5]

A2 · Human in the loop · Not reported
Not reported.

A3 · Monitoring and assurance · Evidenced
An independent two-year randomised trial measured how students used Khanmigo and its effect on maths achievement. [3] [4]

A4 · Vendor AI · Not reported
Built with early access to OpenAI's GPT-4; vendor controls not reported. [2]

A5 · Agent controls · Not reported
No agents described.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– Students assigned to Khan Academy in the trial made faster maths gains than the comparison group, per the researchers.

– Almost all students tried Khanmigo at least once: 96%, per the trial.

DID NOT

– Use: the median student messaged Khanmigo on a third of practice days, and in 17% of the exercise sessions in which they made a mistake.

– Gains were similar to Khan Academy practice without AI help; in the reporting on the study, the Khanmigo tutor did not add anything.

– Messages were mostly bare answers or clicks on suggested prompts, per the paper; Chalkbeat reports many off-topic messages and attempts to get the answer.

– Sal Khan called the tutor a "non-event" for a lot of students; a geometry teacher at an early-adopting school no longer uses it.

UNPROVEN

– Whether the rebuilt platform, with Khanmigo appearing after mistakes, raises use and learning.

– Effects for students outside remedial maths sessions in one Tennessee district.

Timeline

2023 Khan Academy introduces Khanmigo, its AI tutor and teaching assistant [1]

2024 Two-year randomised trial begins in 18 Tennessee middle schools [5]

Oct 2025 Khan Academy announces a rebuilt district platform with Khanmigo embedded, piloted with districts [1]

Apr 2026 Sal Khan calls the tutor a "non-event" for a lot of students [2]

Aug 2026 Working paper reports thin engagement and no gain beyond Khan Academy without AI [3]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: A. Grade: E, No measurable effect. Proof: Partly proved. Level of change: Not graded.

No level assessed: band E, tested with no measurable effect. An independent two-year trial found the AI tutor added no learning gain beyond Khan Academy itself. Claimed as transformational (band A); that remains a claim.

Graded E, claimed A. In 2023 the founder predicted the biggest positive transformation education had ever seen. An independent trial found the AI tutor added no measurable learning gain beyond Khan Academy itself, and the median student used it on about a third of practice days. The transformation remains a claim.

The SEAM view and lessons learnt

The technology worked as designed; the gap sat between the tool and the people meant to use it. Access was nearly universal, but students had to choose to ask for help, and the median student did so on a third of practice days. For a larger organisation rolling out an AI assistant, the transferable point is to measure real use as well as access, and to build the assistant into the task at the moment help is needed.

1. Measure how often people actually use an AI tool, as well as how many have access.
2. Build the assistant into the task at the point of need.
3. Test against the same process without AI before claiming gains.

Evidence

Score 3 of 4. Independent: a two-year cluster randomised trial by University of Toronto and Charles River Associates researchers (working paper, August 2026), plus the founder's on-record account.

Evaluation method. Randomised trial: 18 Tennessee middle schools, 2024 to 2026, comparing Khan Academy with Khanmigo against usual remedial maths; working paper, not yet peer reviewed.

Sources disagree. Khan Academy says it already knows its platform works; the trial agrees Khan Academy helped but found no added effect from the AI tutor. At Hobart High School, the superintendent has found Khanmigo beneficial overall, while a geometry teacher there no longer uses it.

Status. Ongoing: Khan Academy's rebuilt district platform, with Khanmigo embedded, is due for all district partners for back-to-school 2026.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/khan-academy-khanmigo-ai-tutor

[1] Khan Academy Blog: Khan Academy reimagined for every classroom, in partnership with districts (October 2025)
https://blog.khanacademy.org/khan-academy-reimagined-for-districts-2026/

[2] Chalkbeat: Why Sal Khan's AI revolution hasn't happened yet, according to Sal Khan (April 2026)
https://www.chalkbeat.org/2026/04/09/sal-khan-reflects-on-ai-in-schools-and-khanmigo/

[3] EdWorkingPapers (Annenberg Institute, Brown University): One Click Away: AI Tutoring with Khanmigo in a Two-Year School Experiment (August 2026)
https://edworkingpapers.com/ai26-1551

[4] Chalkbeat: The problem with an AI tutor: students don't want to use it (August 2026)
https://www.chalkbeat.org/2026/08/25/ai-tutoring-students-khanmigo-khan-academy-engagement-study/

[5] KQED MindShift (The Hechinger Report): Students didn't get answers from Khanmigo. They didn't want its questions, either (September 2026)
https://www.kqed.org/mindshift/66662/students-didnt-get-answers-from-khanmigo-they-didnt-want-its-questions-either

Khan Academy website: https://www.khanacademy.org

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