FRANCE · COMPUTING · PROJECT 06 · EUCYS 2026, KIEL

The AI that makes you think.

A Socratic tutor that runs **entirely on the student's phone**, reads the real lessons, and **cannot write the answer**. Used by over 1,000 students.

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Project LUCID · lucid.lucarnepro.fr/eucys

THE PROBLEM

Every AI a student can open today hands over the answer, and sends the homework to a server abroad.

OUR QUESTION

Can a tutor make students think, from their own lessons, on their own phone, with nothing leaving it?

Two things never leave the phone: the data, and the answer.

THE SCHOOL

The school's own system

Timetable, homework, grades, lesson text.

Maths, homework: Solve $x^2 – 5x + 6 = 0$

syncs into the app →

ON THE PHONE · NO SERVER, NO NETWORK NEEDED AIRPLANE MODE WORKS

READS
the lessons

The right passages, from the student's lessons and a textbook stored on the phone.

Found: *"Δ = $b^2 – 4ac$ decides how many solutions…"*

WRITES
without the answer

A small model on the phone's chip writes the turn. The answer's spellings are removed from its grammar: **unwritable**.

Unwritable here:
~~x = 2 or x = 3~~

ASKS
the next question

What was right, a hint only if stuck, and a question. Always a question.

QUESTION
What is Δ, with a = 1, b = –5, c = 6?

The data never leaves the phone.
Lessons, dialogue, grades stay on the device, in the student's country. Bytes sent in local mode: 0.

The answer never leaves the model.
Not filtered out afterwards. Never generated in the first place.

a question, not the answer →

THE STUDENT

Does the work

Finds x = 2 and 3, and knows why.

"Degree 2… the discriminant?"

A 4-bit model on the chip

An open-weight model of 2 to 4 billion parameters, quantised to 1.6 to 3.2 GB, running on the phone itself. **The model underneath can change.**

Gemma 4 E2B · LFM2.5 2.6B · Gemma 3 4B · llama.cpp

Retrieval on the device

The lessons and an open textbook corpus of **8,672 chapters**, indexed on the phone by keywords and by meaning.

BM25 + 256-d embeddings · rank fusion · 41 MB

Constrained decoding

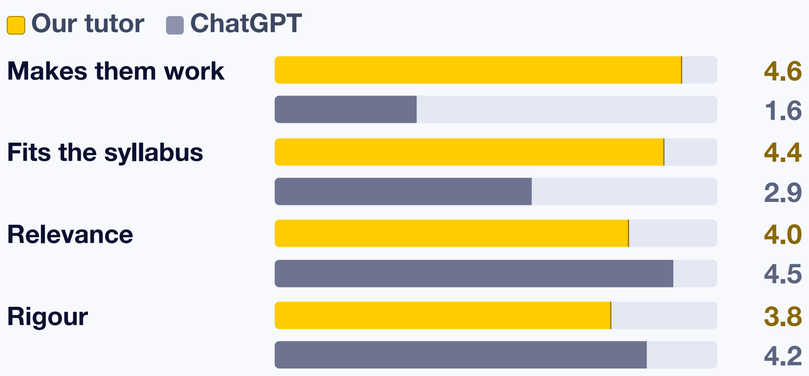
Each turn is decoded inside a grammar compiled for the exercise, with **every spelling of the answer removed**.

GBNF grammar · three-move contract: diagnosis, hint, question

TEACHERS SAY YES

4.6/5

for making the student work. ChatGPT: 1.6.

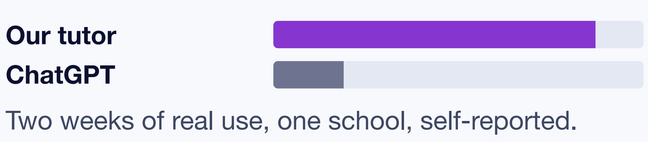


40 school questions, 5 subjects, graded blind by two teachers.

STUDENTS SAY YES

41 of 47

trust it with their data. ChatGPT: 9 of 47.



Two weeks of real use, one school, self-reported.

AND THEY USE IT

1,000+

students, with no marketing.

On the App Store since 10 September 2026, by word of mouth between classmates. What they did this month is on the right wall.

WHAT WE DO NOT CLAIM

Supported, not proven: one school, 47 testers, perceived learning. **A paraphrase can still leak**: we measure it at the stand. **The published app** sends generation to a server by default; the on-device engine is what runs at this stand.

NEXT

Every European school system. A controlled trial with a delayed test. **A teacher's view** of the dialogues.

Report, dataset, app
lucid.lucarnepro.fr/eucys

LUCID

An AI that helps you think.