MathGPT.ai™ | CASE STUDY

Professor Switched to MathGPT.ai—Grades Improved

Teresa Overton

Assistant Professor of Mathematics

Northern Virginia Community College

- **Courses taught:** Developmental Math through Calculus
- **Experience**: Over two decades

THE CHALLENGE

- **Improve student success and retention** in gateway math courses

THE SOLUTION

- **MathGPT.ai** responsible AI learning solution

THE RESULTS

- Exam pass rates increased
- Student grades improved
- Teaching capacity expanded

"Students who consistently put in the time [now] score high Bs to As."

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NOVA instructor's experience with responsible AI tutoring led to ***increased exam pass rates, improved student grades,*** and ***expanded teaching capacity***.

THE CHALLENGE

The student population in Teresa Overton's courses at NOVA ranges from recent high school graduates to working adults to lifelong learners. Regardless of background, she notes, "they are just trying to get through."

The workload at a large, open-access institution is relentless for its instructors. Teresa's inbox is filled daily with student screenshots of handwritten problems, questions about where to start, and requests to check work. For years she was attempting one-on-one support at scale, but it was not sustainable.

Then in 2025, her Dean tasked the math faculty with identifying tools that could move the needle on student success and retention. It was time to explore a new approach.

THE SOLUTION

Teresa is not a typical early adopter, and had spent years as a power user of her previous homework solution, so transitioning to a new solution might be daunting, and would need to be impactful. She launched a pilot of MathGPT.ai in fall of 2025 across three sections—two in Developmental Math (MDE 10), and one in Precalculus (MTH 161)—with a total of 66 students enrolled. She set up her courses over the summer, and found the process straightforward compared to platforms she had used before.

The pilot was immediately successful. After the first exam, student results improved. Teresa was impressed and shared her results directly with the MathGPT.ai team and her Dean. The numbers spoke for themselves:

Developmental Math:
31% improvement in students earning a C or better.

Precalculus:
10% improvement in students earning a C or better.

Positive results continued in both courses and expanded course adoption proceeded the next semester.

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NOVA Math Course AI Tutoring by the Numbers

Academic year 2026

108 students

2,372 tutoring sessions

536 tutoring hours

5 hours per student

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WHAT WORKED

Teresa credited the improvement in results to students interacting with the Socratic AI tutor, working through problems independently, on their own schedule, at their own pace, rather than waiting for office hours or sending screenshots to her inbox. She applauded, "students who consistently put in the work and time [now] score high Bs to As."

FEEDBACK LEADS TO PRODUCT IMPROVEMENTS

Students agreed, and most found the on-demand AI tutoring helpful within their assignments. Some critiqued the AI tutor's strict Socratic approach, preferring more straightforward responses over persistent questioning. Teresa passed this feedback on to the MathGPT.ai team, which resulted in the development of a new "Guided Study" tutoring mode option to better meet students where they are.

EXPANDED COURSE ADOPTION

Spring 2026 brought two new courses: a second Precalculus section and Calculus I (MTH 263). Although the spring student cohort was smaller, Teresa's classes logged over 1,500 tutoring sessions—nearly double the fall semester volume.

Calculus I drove much of that activity. Students in that course averaged 47.8 sessions and approximately 11 hours of AI tutoring per student throughout the semester. For a course with that level of conceptual difficulty and no TA coverage, the new system was filling a real gap.

Average usage per student also nearly tripled from fall to spring semester—from 2.9 hours to 8.1—as students became more comfortable leveraging the tutor.

ALL AROUND BETTER EXPERIENCE

After a year, Teresa is direct about how the system earns its keep. Beyond the improved student performance in her courses, her personal experience with MathGPT.ai has been remarkable.

- **Fewer emails.** Students who previously sent screenshots of their work now work through problems with the AI tutor instead, freeing up time for better quality interactions.
- **Setup that works.** The question bank covers her course subjects well. The instructor controls are practical and customizable. Getting started was easy and efficient.
- **Responsive support.** When questions or issues arise, they are resolved in a timely manner. Teresa applauds the support, "the service I have received is the best I have ever experienced."