STUDENTS TRIPLE ODDS OF SCORING 5 ON AP® EXAM

Magna Education confidential

Overview

This study evaluates the effect of Magna, an **AI-powered learning platform**, on Advanced Placement (AP) US Government and Politics (APGP) exam performance. Using data from two consecutive cohorts: 1) 2024 (no Magna) and 2) 2025 (Magna implemented after Unit 1), we compare exam results while controlling for baseline achievement on Unit 1 assessment prior to starting Magna use. The course was taught in both years by the same experienced teacher with over 10+ years experience teaching APGP. Logistic regression analysis reveals that **Magna had a statistically significant and substantial effect on higher-level achievement.** Students using Magna had **2.25 times higher odds of earning a 4 or higher** and **3.25 times higher odds of earning a 5**, even after accounting for Unit 1 performance.

Introduction

The AP program provides students the opportunity to earn college credit based on exam performance. While a score of 3 demonstrates competency, **scores of 4 or 5 are often necessary for credit recognition** making these thresholds an important instructional goal.

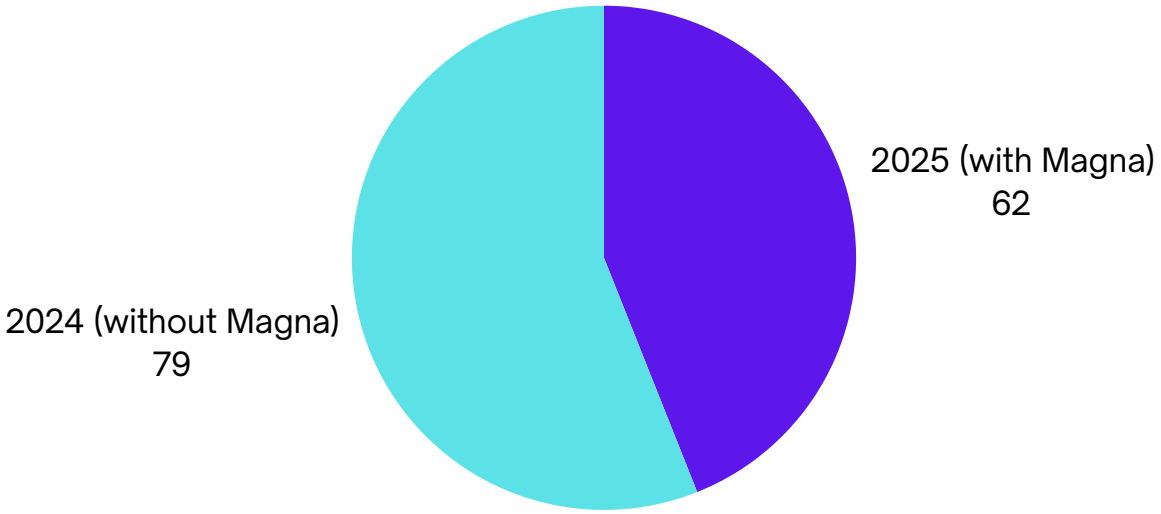
In 2025, a school in Louisiana introduced Magna, an AI-powered platform in Spring 2025, after students completed their Unit 1 assessment. Magna Education leverages advanced AI technology to reduce administrative burden on teachers by **creating and grading AP assessments in seconds while providing real-time actionable feedback**. The platform offers students personalized study resources, comprehensive exam practice, and immediate feedback, with access to **thousands of questions per AP course** that enable extensive practice opportunities. Magna's rubric-aligned feedback system is built based on human feedback and reviews done by **subject matter experts and AP teachers to ensure accuracy and quality**, providing targeted practice that supports individual learning needs

The 2024 cohort served as a natural control group, having completed the same curriculum without Magna. This study evaluates Magna’s effect on AP outcomes, using Unit 1 multiple-choice scores as a baseline predictor of student preparedness

Participant Details

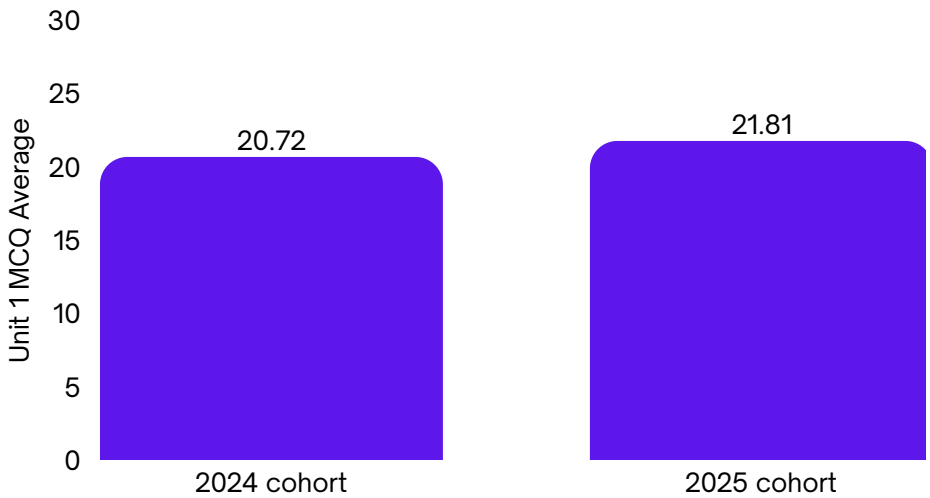
In 2024 cohort, there were 79 students and Magna was not used as part of the curriculum by any of the students. For the 2025 cohort, there were 62 students and Magna was introduced in Spring 2025. In both years, the students took Unit 1 assessment in Fall semester of the corresponding year prior to using Magna. The Unit 1 assessment included 30 Multiple Choice Questions each worth 1 point for a total of 30 points for the assessment. The 2024 cohort had an average of 20.72 vs 21.81 for the 2025 cohort.

Student distribution for 2024 and 2025 cohorts



Number of students in 2024 (n=79) and 2025 (m=62)

Unit 1 score comparison between 2024 and 2025 cohorts



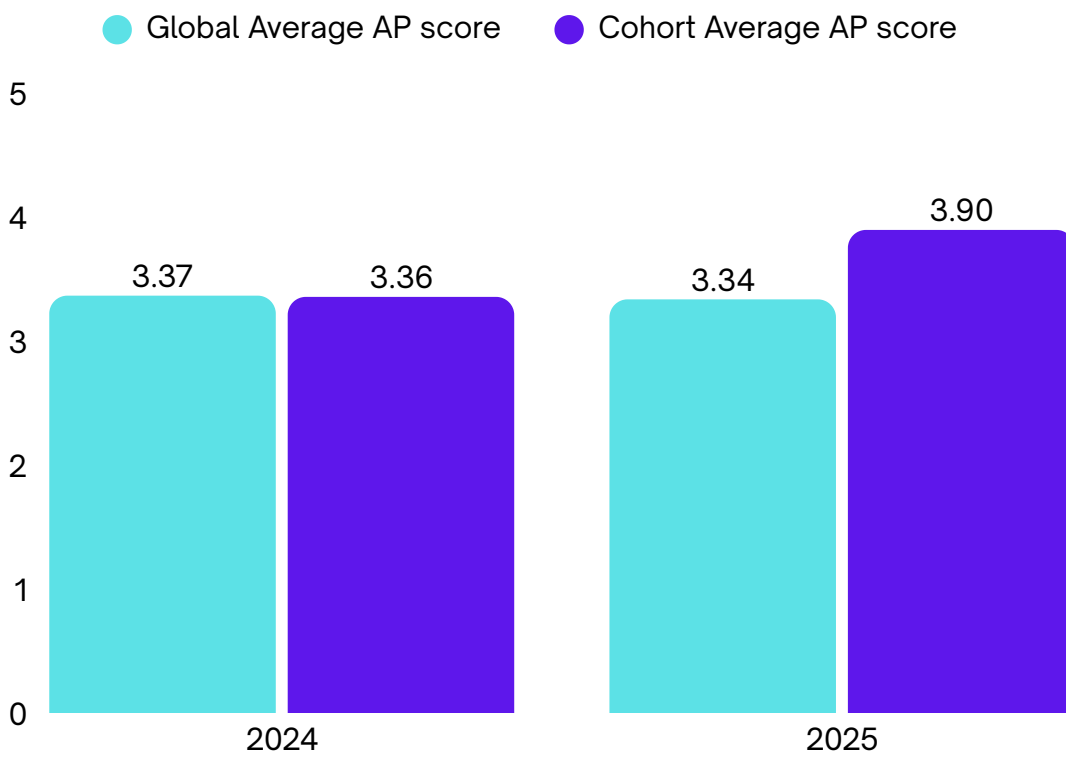
Average of Unit 1 (30 MCQs 1 point each) across 2024 and 2025 cohorts

AP scores comparison

The students in the 2024 cohort (without Magna) had very similar average AP score (3.36) compared to the global average AP score (3.37). However, we noticed a big increase in the average AP scores for the 2025 cohort (Magna implementation) with the average of 3.90 compared to the 2025 global average AP score of 3.34. We didn't have scores of 2 students available for the 2025 school year so the reported numbers are for the remaining 60 students. The year-over-year difference in the **average AP score was 0.54** - more than half a point which is considerable improvement especially when compared to the negligible change in global averages for the course year-over-year.

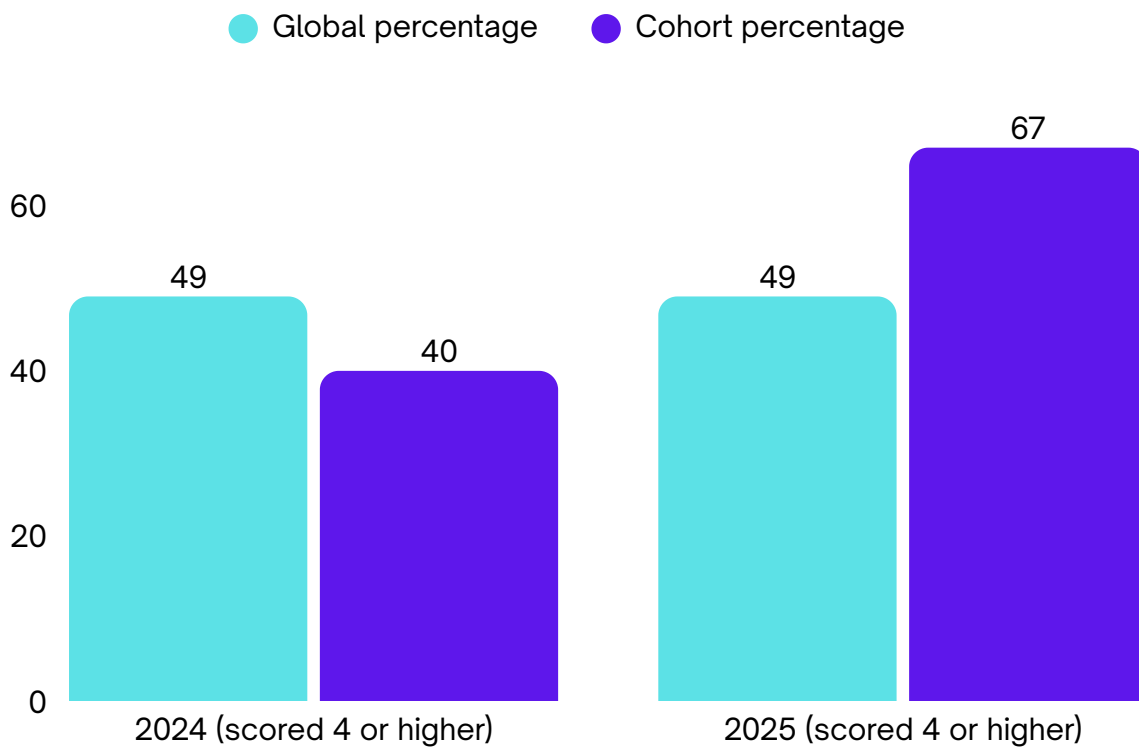
The percentage of students scoring 4 or higher **increased from 40% to 67%** for the 2025 year. The increase was even more substantial for the students scoring the highest score of 5 with an **increase from 12% to 35%** for the 2025 cohort. Given that the school was already performing well with 82% of the students scoring 3 or higher in 2024, we see a modest increase to 88% of the students scoring 3 or higher in 2025.

Average AP score comparison



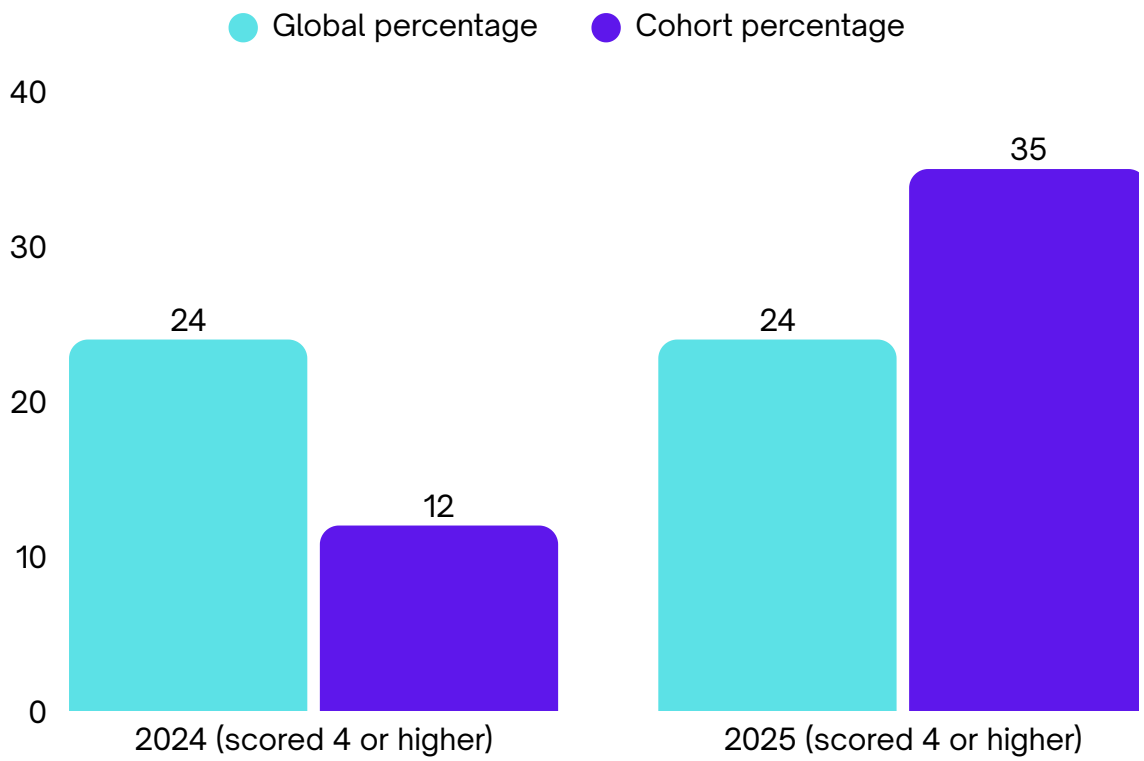
Average AP scores increased by 0.54 for the cohort using Magna

AP scores of 4 or higher



Percentage of students scoring 4 or higher jumped by 1.7X from 40% to 67% in 2025

AP scores of 5



Percentage of students scoring 5 jumped by 2.9X from 12% to 35% in 2025

Methodology

We applied a Logistic regression model to identify the effect of Magna on the AP scores and estimate the probability of reaching:

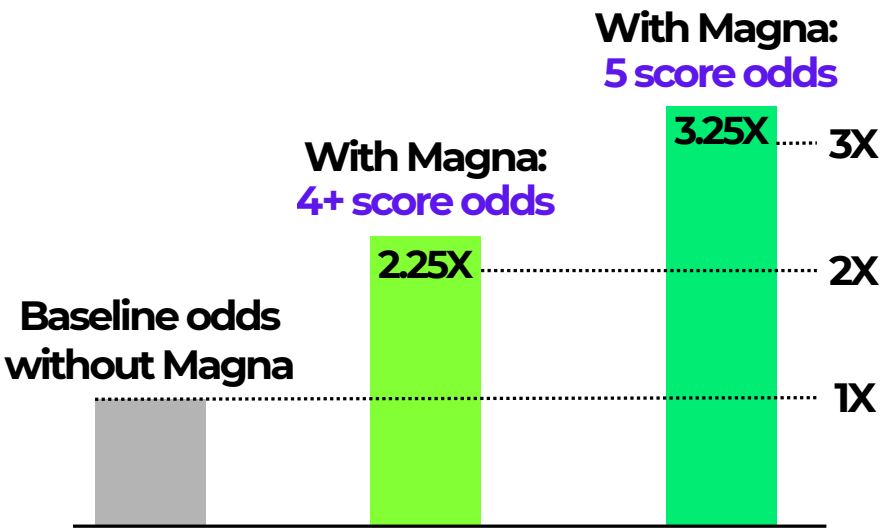
- AP score ⩾ 4 (full college credit threshold)
- AP score = 5 (perfect score)

We used the Unit 1 results to control for the variance in the cohorts performance and isolate the Magna impact.

$$\ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 U1 + \beta_2 Magna$$

Key Findings

We found that while both the Unit 1 performance and Magna effect were statistically significant ($p < 0.05$) in predicting the student AP scores, Magna had an outsized effect while keeping the effect of Unit 1 performance constant. Based on the predicted coefficients, students using Magna had **2.25 times higher odds of scoring a 4 or higher** and had **3.25 times higher odds of scoring the highest score of 5.**



Students using Magna had significantly higher odds of scoring a 4 or 5

Predictive Value of Magna Assessments

We found that the student performance on MCQs and FRQs in the Magna platform aligns with their final AP scores. The table below shows student performance on MCQs (column) and FRQs (rows). The first number in the cell is the average AP score of the students and the second number is the number of students who had that performance in the Magna platform. For example, the bottom right cell shows that there were 3 students who scored between 60-64% on the Magna FRQs and 90-99% on Magna MCQs. The average AP score is 5.0 and hence all three of them score a perfect score of 5 on their AP exam. As can be seen, students scoring at the lower end of the spectrum on MCQs and FRQs were less likely to score a 4 or a 5 whereas the students scoring higher on MCQs and FRQs were more likely to score a 4 or a 5. This highlights the predictive value of Magna in identifying at risk students.

Average FRQ performance on Magna assessments

Average MCQ performance on Magna assessments		0-4%	5-9%	10-14%	15-19%	20-24%	25-29%	30-34%	35-39%	40-44%	45-49%	50-54%	55-59%	60-64%
	0-9%									4.0 (1)				
	20-29%	2.0 (1)				2.0 (1)		4.0 (1)						
	30-39%			2.0 (2)						4.0 (1)				
	40-49%		4.0 (1)			2.0 (1)			3.0 (1)	4.0 (2)				
	50-59%				5.0 (1)	4.0 (1)		3.5 (2)						5.0 (1)
	60-69%	4.0 (1)		2.0 (1)	5.0 (2)			5.0 (1)	3.3 (3)	3.0 (1)				
	70-79%						4.0 (3)		4.0 (2)	4.3 (3)		5.0 (1)	5.0 (1)	5.0 (1)
	80-89%			5.0 (1)		4.0 (1)			3.8 (4)	3.5 (2)	3.0 (1)	3.0 (1)	2.0 (1)	4.0 (1)
	90-99%	5.0 (1)				3.0 (1)	5.0 (1)	4.0 (1)	5.0 (1)	4.0 (1)		5.0 (1)	5.0 (1)	5.0 (3)

Conclusion

In this high-performing school, Magna's impact was most evident at the **upper end of achievement**. Students using Magna had 2.25X higher odds of scoring 4 or more and 3.25X higher odds of scoring a 5. In addition, their average AP exam scores were higher even after controlling for baseline ability.

In lower-performing cohorts, Magna may play a different role: helping more students cross the passing bar as well as lifting top scores.

Overall, Magna shows strong promise as a tool for enhancing AP performance — with the potential to both **expand access to passing scores** in less advantaged contexts and **raise excellence** in already high-performing classrooms.

Magna has wide variety of courses avaiable across different disciplines such as Science (AP Biology, AP Chemistry, AP Environmental Science, AP Psychology), Social Science (AP US History, AP World History, AP US Government and Politics, AP Macroeconomics, AP Microeconomics), Math (AP Statistics), Computer Science (AP Computer Science Principles) and soon to be launched AP English Literature and Language and AP Calculus AB/BC.

Please reach out to us to start your pilot today!

www.magnaeducation.ai

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