LXDRESEARCH
AT CHARLES RIVER MEDIA

Grammarly Efficacy Study (Fall 2023 and Fall 2024)

Phoenix College



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PHOENIX COLLEGE
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PHOENIX COLLEGE EFFICACY STUDY SUMMARY
FALL 2023–FALL 2024

MODERATE EVIDENCE
LXD RESEARCH

STUDY DETAILS

Location
- Phoenix College, Arizona

Sample sizes
- 569 unique Grammarly users from Fall 2023 and Fall 2024
- 3,069 unique comparison students in similar writing-intensive courses
- 6 interviews with instructors who teach undergraduate courses

Student demographics
- 50% Pell Grant eligible
- 23% Transfer
- 63% Hispanic
- 8% Black
- 18% White

Academic period
- Fall 2023 and Fall 2024

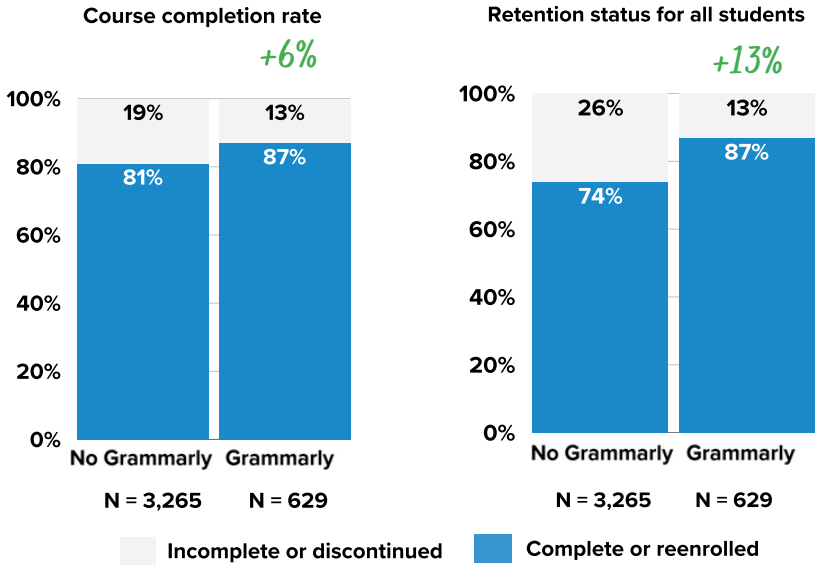
Implementation
- University-wide Grammarly licenses provided to all enrolled students
- Instructor-led onboarding sessions for students in some courses
- Varied course implementations based on instructor preferences

Methodology
- Study design: Quasi-experimental design with treatment and comparison groups
- Assessment measures: Course completion rates, writing quality scores, usage analytics
- Quantitative data analysis: Chi-square tests, multiple regression models, analysis of covariance
- Qualitative data and analysis: Semi-structured interviews followed by thematic analysis of instructor perceptions and experiences

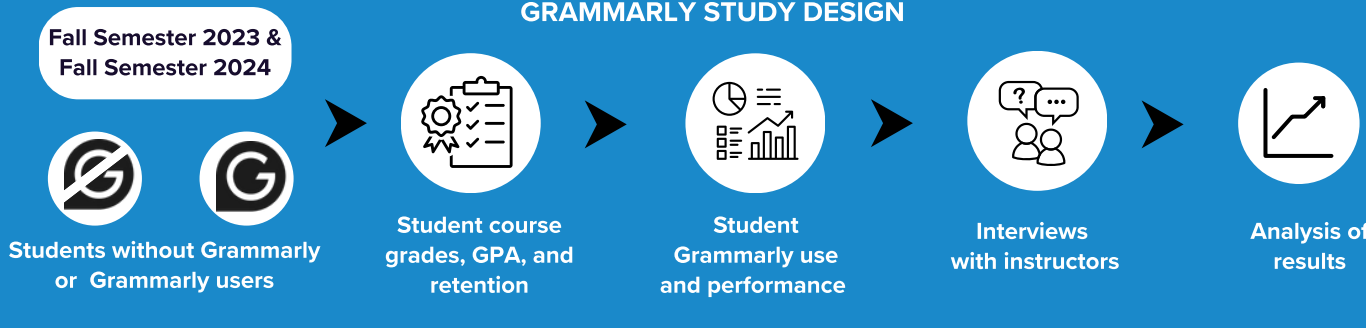
STUDY FINDINGS

- Course completion rates were 6% higher among Grammarly users (87%) vs. nonusers (81%).
- Retention rates were 13% higher for Grammarly users (87%) vs. nonusers (74%) returning the following year.
- Retention rates were up to 21% higher among Grammarly users vs. nonusers across five popular majors.
- Students achieved higher GPAs using Grammarly, and the more they used Grammarly, the higher their GPAs—daily users (5–7 days/week) outperformed occasional users (<3 days/week) by 0.26 points.
- Instructors reported that Grammarly enables differentiated instruction based on students' needs, successfully promotes ethical use of generative AI features, and helps them with instructional tasks and communications.

Completion and reenrollment rates were significantly higher for Grammarly users vs. nonusers.



GRAMMARLY STUDY DESIGN



grammarly Part of SUPERHUMAN

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Qualitative Findings: Instructor Perspectives

Educator sample and methodology

Interviews were conducted with six instructors currently teaching undergraduate courses at Phoenix College. Using a semi-structured interview format, instructors reflected on their implementation of Grammarly during Fall 2024. Conversations explored perceptions of how Grammarly influenced students' writing development, classroom engagement, and attitudes toward generative AI tools. Thematic analysis was used to identify key patterns across instructor experiences, focusing on observed impacts, integration strategies, and evolving instructional practices.

Differentiated instruction supports diverse learners

Instructors observed that Grammarly provides differentiated instruction based on students' needs.

> *"Half of our students are Hispanic, and whatever percentage of them are English second-language learners ... When we get to the end of the class, how much better the class as a whole has done ... I'm always telling students that, overall, their writing has improved."*
>
> **Instructor, Biological Science**

Ethical AI integration promotes workplace readiness

Instructors reported successfully promoting ethical use of generative AI features using Grammarly.

> *"How do I teach them how to use it ethically as opposed to ... 'I hope they don't cheat.' If you're going into a workplace, you aren't going to get to use five tools, six tools—you're going to use whatever ... is given to you."*
>
> **Instructor, Computer Science**

Enhanced instructional efficiency and communication

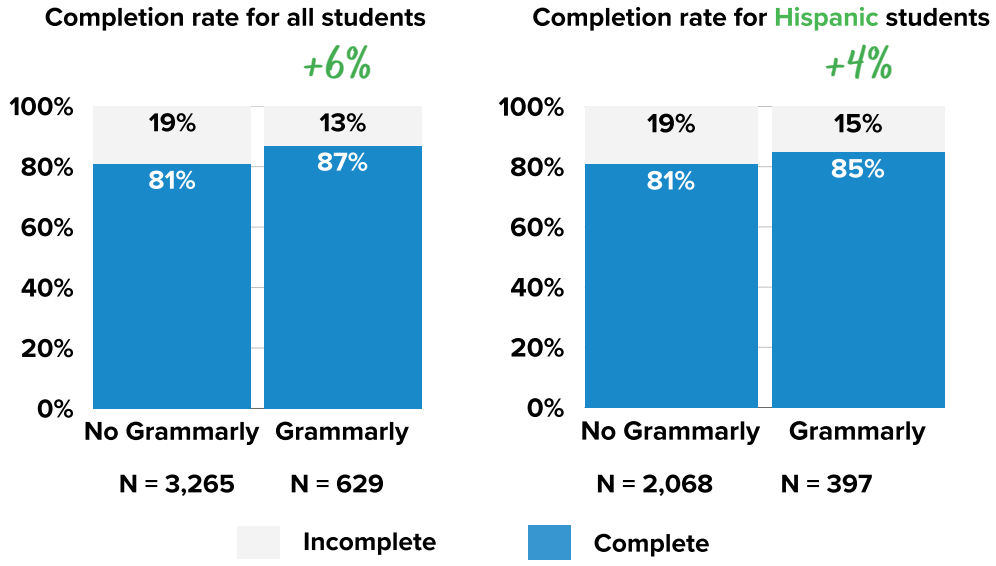
Instructors stated that Grammarly helped them with instructional tasks and communications.

> *"Grammarly takes care of commas and capitalizing the ''I' ... so I can pay attention to if [students are] understanding the content."*
>
> **Instructor, Pre-Med Sciences**

Quantitative Findings: Student Outcomes

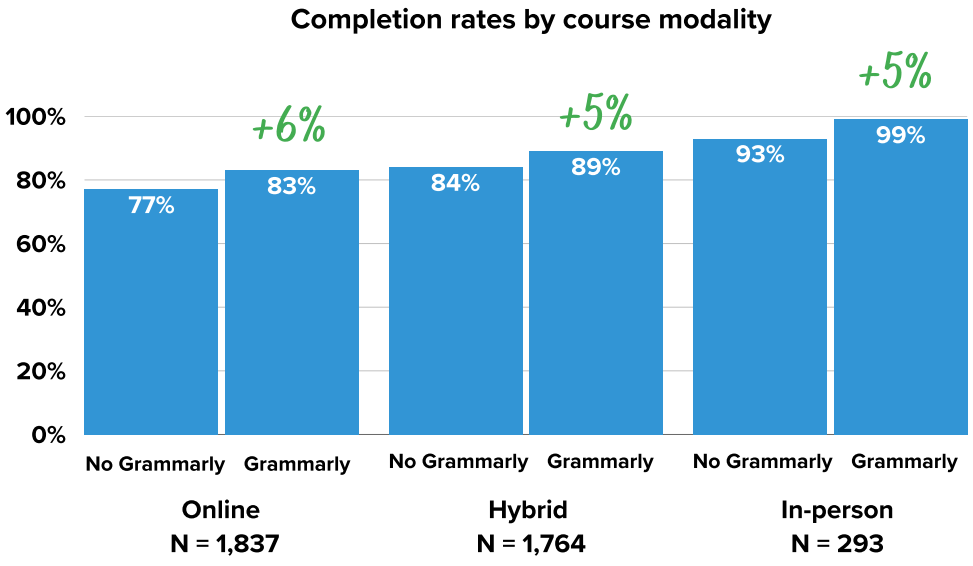
Course completion rates higher

Course completion rates serve as an early indicator of student success, particularly in writing-intensive courses where students often struggle with the dual demands of content mastery and academic writing skills. Research consistently shows that students who successfully complete their initial college courses are significantly more likely to persist to degree completion, making completion rates a key metric for institutional effectiveness. Completion rates were 6% higher among Grammarly users (87%) vs. nonusers (81%; p <.001). Completion rates among Hispanic students were 4% higher among Grammarly users (85%) vs. nonusers (81%).



Course completion rates higher across course modalities

Course completion patterns also varied by instructional modality. Course completion rates were higher among Grammarly users vs. nonusers for all modalities. Although in-person courses had the highest overall completion rates, differences were highest in online courses (+6.4%) compared to hybrid (+5.0%) and in-person courses (+5.2%).



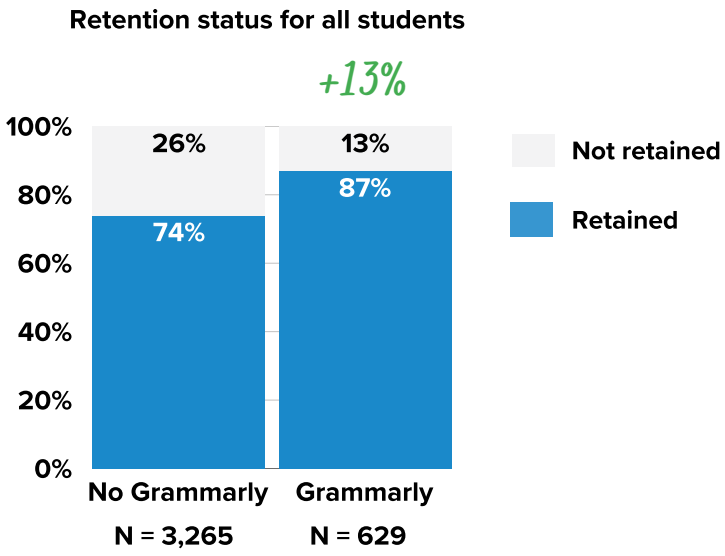
How is completion rate calculated?

Course completion is defined as earning grades of C or higher, with grades of D, F, withdrawn, or incomplete classified as non-completion.

Note: percentages may not align due to rounding

Retention rates higher

Student retention for the following academic year represents a critical predictor of degree completion, particularly for community college students navigating complex educational and life demands. Across all years of study, retention rates were significantly higher for Grammarly users vs. nonusers. Retention rates were 13% higher for Grammarly users (87%) vs. nonusers (74%) returning the following year (p <.001).

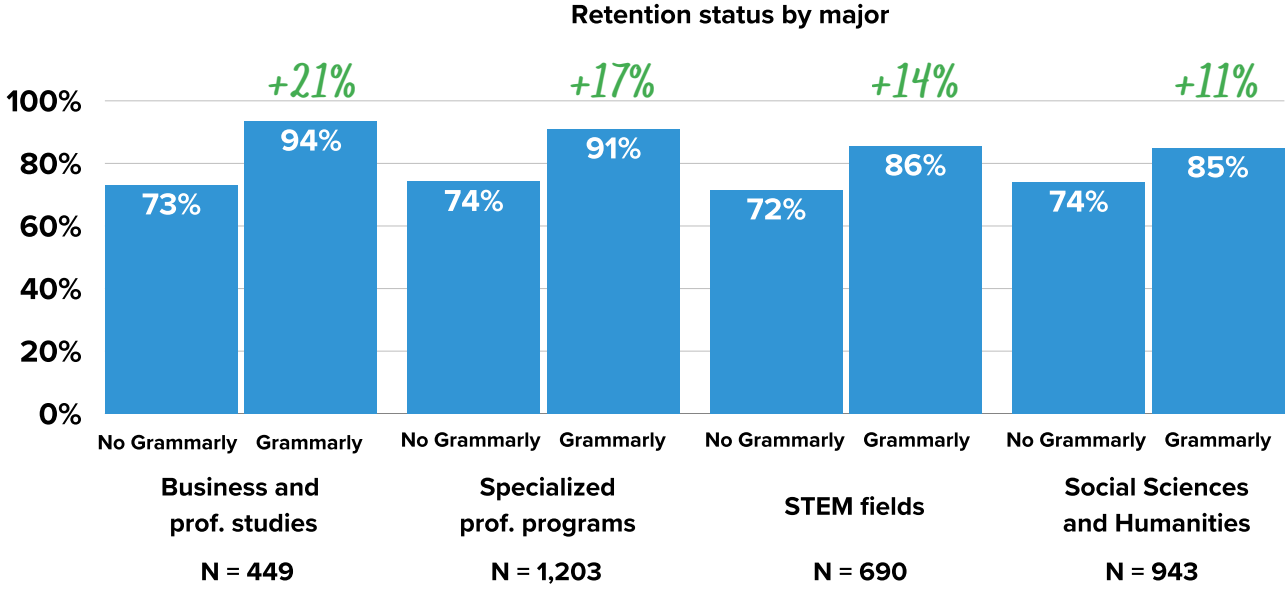


How is retention rate calculated?

Retention rate was calculated by determining the percent of students enrolled in one or more Phoenix College courses in the fall of the previous year that were **still** enrolled in one or more classes at Phoenix College in the fall of the subsequent academic year.

Retention rates higher across majors

Across all years of study, retention rates were significantly higher across majors for Grammarly users vs. nonusers. The retention benefits from Grammarly were most pronounced among business and professional studies courses, which typically require clear, concise, and error-free communication that mirrors professional workplace standards. Retention rates were higher across majors for Grammarly users vs. nonusers: including +21% for business, +17% for specialized professional programs, and +14% for STEM majors. Social sciences and the humanities also showed a significant positive association (85% vs. 74%, $\chi^2 = 7.62$, p <.01, $\varphi = 0.090$).



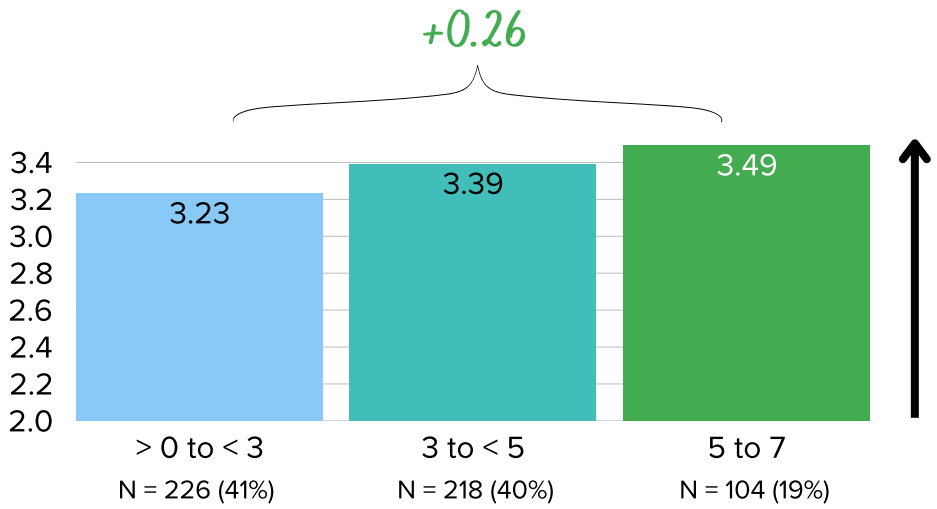
Grade point average higher

Grammarly use predicted higher GPAs vs. those for nonusers. Grammarly users and nonusers were demographically similar and arrived at Phoenix College with similar high school GPAs (3.06 for users; 3.00 for nonusers). After controlling for high school GPA, race/ethnicity, international status, and Pell Grant eligibility, Grammarly users demonstrated a significantly (0.16) higher GPA across all courses.[1]

Grade point average higher with more use

Academic support interventions, including writing support technologies, are most effective when used regularly. Usage analysis showed a clear dose-response relationship, in which low-usage students averaged GPAs of 3.23, students using Grammarly 3–5 days per week achieved 3.39, and high-usage students (5–7 days per week) reached 3.49.[2] This 0.26 GPA difference between high-usage and low-usage groups suggests that consistent engagement with writing support unlocks substantial academic benefits.

Average GPA by Grammarly Use Category



Days per Week on Average
(% of Grammarly Users)

Conclusion

This study represents a compelling example of how AI-powered writing support can meaningfully enhance community college student success, especially for students who used Grammarly consistently (i.e., at least 3 days per week). These findings were robust across popular majors and across the modalities of online, hybrid, and in-person courses. Positive outcomes were consistent across multiple academic outcomes including retention rates, course completion, and GPAs—particularly among high-usage students. In addition to novel findings about impact across course modalities and majors, these findings reinforce findings from previous studies of regionally distinct four-year colleges serving students from very different demographics. As such, these findings suggest that Grammarly use has a meaningful impact on post-secondary academic achievement for a diverse array of students. Institutions concerned with unregulated AI use and underdeveloped student writing abilities are seeking evidence-based approaches to student success—these findings indicate that sustained use of AI-powered writing tools represents a promising approach to post-secondary academic support.

Statistical Citations by Key Finding

Key finding: Course completion rates were 5.8% higher for Grammarly users vs. nonusers.

[1] All students: ($\chi^2(1, N = 3,894) = 11.90$, $p < .001$, $\varphi = 0.055$).
[2] Hispanic students: ($\chi^2(1) = 4.93$, $p = .026$).
[3] Course Modality: Online ($\chi^2(1, N = 1,837) = 6.05$, $p = .014$, $\varphi = .06$).
Hybrid (93.8% vs. 77.7%, $\chi^2(1, N = 1,764) = 32.56$, $p < .001$, $\varphi = .14$).

Key finding: Retention rates were significantly higher for Grammarly users (87%) vs. nonusers (74%).

[1] All students: ($\chi^2(1, N = 3,894) = 51.16$, $p < .001$, $\varphi = 0.115$).
[2] Retention effects by major: Business and professional studies (93.5% vs. 73.1%, $\varphi = 0.175$), Specialized professional programs (91.0% vs. 74.2%, $\varphi = 0.138$), and STEM fields (85.6% vs. 71.5%, $\varphi = 0.125$).

Key finding: GPAs for Grammarly users were significantly higher overall ($\beta = 0.16$). High-usage students averaged significantly higher GPAs (3.5) than low-usage students (3.2).

[1] Overall effects on GPA: ($\beta = 0.156$, $p < .05$, final model $R^2 = .102$).
[2] Usage analysis: ANCOVA with post-hoc comparisons ($F(12, 307) = 2.51$, $p < .05$, $R^2 = .09$.

How to read statistical citations:
The statistical results presented above use chi-square tests to determine whether differences between groups are meaningful or due to chance. The notation χ^2(df, *N* = sample size) = test statistic, *p* = probability value provides key information. The *N* shows how many people were studied, while the chi-square value measures how different results are from chance expectations. The *p*-value indicates the likelihood these results happened randomly; values below .05 are considered statistically significant. Values near .05 suggest trends that may still have practical importance, especially when studying groups with known challenges.



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