

# Vocabulary.com usage helps boost Missouri standard proficiency rates among high school students.



Vocabulary.com is an award-winning vocabulary acquisition platform that is built on learning science principles and a powerful adaptive engine to deliver the fastest and most effective way for students to master new words (Zimmer, n.d.). Using a “big data” approach and item response theory to analyze response patterns from millions of learners, Vocabulary.com creates a personalized learning experience for each learner that is truly tailored to their needs. As of this writing, two million students across 50,000 schools have used Vocabulary.com to master over 350 million words.

## How Vocabulary.com works

The goal of Vocabulary.com is to enable word mastery, not memorization. The platform achieves this by systematically exposing students to words they need to learn in a variety of contexts, using a variety of question types, multiple meanings, and activities. The software adapts to each learner based on their responses and reintroduces words they’ve grappled with in the past until each word on their list is truly mastered. Vocabulary.com’s gamification features keep learners engaged and motivated through interactive learning at their own pace, plus badges and points to keep track of and celebrate their progress. The site can be used for independent and collaborative learning, at home or in the classroom, allowing learners to practice and master new words anytime, anywhere.

## Prior research

Efficacy studies have consistently shown the positive effects of Vocabulary.com usage on student learning. For example, a couple of studies found that Vocabulary.com usage was associated with improved FCAT and FSA reading exam performance among middle school students in Florida (Bruening et al., 2015; Project Tomorrow, 2019). Furthermore, a qualitative study has unpacked the benefits of Vocabulary.com’s gamification approach to word learning through the accounts of two instructors using the platform with their high school students in New York (Abrams & Walsh, 2014). In the present study, we examine the quantitative gains associated with various implementation modes and usage levels of Vocabulary.com at the high school level. The data come from a high school ELA teacher in the state of Missouri.

## Implementation

In short, the instructor started each class with a “First Fifteen” Vocabulary.com warm-up, so the students had daily practice in class as well as opportunities to continue learning independently as part of their homework routine. This warm-up typically included at least 3-4 rounds of Vocabulary.com question sets each time.

The instructor used Vocabulary.com in all of his classes (honors, general level, and blended abilities electives). Each week there was a standing expectation that students either master the practice list or complete a minimum of ten rounds of practice (100 questions) in that period. The following week was quiz week, where students had unlimited retakes until they scored at or above 80% on the quiz before the class moved on to the next subject.

## Incentives

The instructor incentivized program participation by adding extra credit to student assignment grades for students who went above the minimum requirements for weekly work. Further, he instituted the “Millennium Club” (MC) in his classes which recognized students who answered 1,000, 2,000, 3,000, and sometimes 4,000 questions in a semester. The MC was a visual aid to show where students were relative to their peers in the work they completed (i.e., volume of questions, not scores). Each 1,000 marker came with a gift certificate allowing the student to get out of homework during the semester, too.

## Volume vs. Accuracy

Why volume and not accuracy is the most common question the instructor received when speaking with colleagues regarding Vocabulary.com implementation. The answer is simple: recursive practice combined with repetition and a fear-free environment makes for accuracy and eventual mastery over the long-term process. That said, the instructor shares that his process and implementation remain a work in progress, and he is continually revising how and what works best to meet the needs of the students.

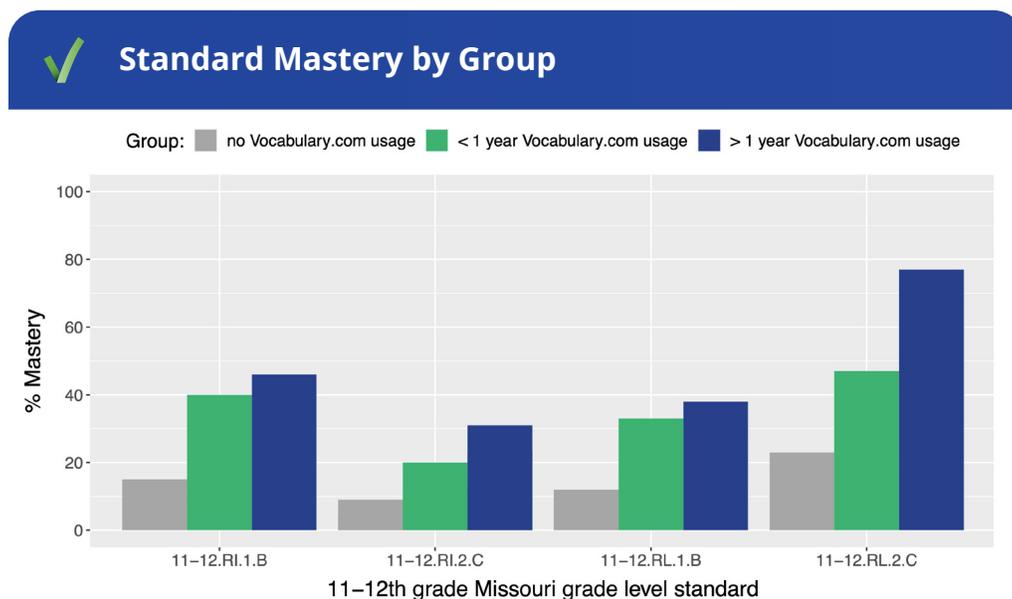
## Results

The instructor examined gains on a set of 11-12th grade Missouri grade level standards, administered for benchmarking three times a year through the Galileo assessment platform. The current analysis included student performance measured as percent proficient on the standards among three groups of high school students at the beginning of the 2022-23 school year.

The three groups of students comprised:

- Group 1: the entire 2023 class results (i.e., essentially “no Vocabulary.com usage”)
- Group 2: a “Senior Humanities” honors-level college credit class that had not previously used Vocabulary.com (i.e., “< 1 year Vocabulary.com usage”)
- Group 3: an “IB Literature” honors-level college credit class that used Vocabulary.com as juniors and remained together for the senior section of a two-year course (i.e., “> 1 year Vocabulary.com usage”)

The data are presented in the figure below. The bars represent standard mastery or the percentage of students in each group scoring at 80% or above on each of the 11-12th grade Missouri grade level standards.



Although students in the two honors-level college credit courses are likely qualitatively different from their peers not enrolled in honors-level coursework, there is a clear quantitative pattern of differences in performance on the standards among the three groups. Specifically, students in both college credit courses outperformed their 12th grade peers consistently across all five standards. While there may be other factors contributing to these differences, consistent usage of Vocabulary.com as described above is likely a strong contributor to the larger gains among students in the two courses relative to their peers.

The notion that Vocabulary.com usage is associated with greater performance on the reading, comprehension, and writing standards, is further corroborated by the notable differences in performance between students in the two honors-level courses, who are otherwise very similar to each other than to peers not enrolled in these courses. Specifically, students in the IB Literature

course who had used Vocabulary.com the previous year as juniors outperformed their peers who just started using Vocabulary.com as seniors across all five standards. This additional finding speaks to the cumulative effect of Vocabulary.com usage—the longer students practice with words on Vocabulary.com, the greater their learning gains.

## Conclusion

Consistent with prior research, the present study's findings provide further support for Vocabulary.com's efficacy in boosting students' vocabulary and reading exam performance. Furthermore, this analysis is the first quantitative study of Vocabulary.com's efficacy among high school students; thus, it serves to provide empirical evidence to support the qualitative accounts of researcher-educators' success with the platform (Abrams & Walsh, 2014). Given the growing body of evidence, educators seeking to boost their middle and high school students' reading and writing skills should consider implementing Vocabulary.com in their classrooms and helping their students make the most of Vocabulary.com's fun, yet powerful approach to word learning.

## References

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