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## About This Research Brief

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This research brief is the ninth in [a series of briefs](#) for the Online Credit Recovery Study conducted by the American Institutes for Research<sup>®</sup> (AIR<sup>®</sup>).<sup>1</sup> In the first brief, we provided an overview of the study and described the online learning model tested. In the second and third briefs, we highlighted key findings about implementation and initial outcomes of Algebra 1 and ninth-grade English (English 9) credit recovery classes. These two briefs indicated that the credit recovery rate in Algebra 1 and English 9 online classes was 7 and 15 percentage points, respectively, lower than in the teacher-directed classes. However, taking an online credit recovery class instead of a teacher-directed class did not significantly affect students' content knowledge.

In this brief, we extend our review of the findings to see whether online credit recovery affects students' progress toward on-time high school graduation. In particular, we test whether taking an online class instead of a more traditional teacher-directed class for credit recovery influences (a) the number of course credits students accumulate over 4 years of high school and (b) on-time high school graduation. The findings could help schools determine whether providing online credit recovery options will have implications for students' ultimate progress toward high school graduation.

## Study Overview

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The study compares an online learning model for credit recovery with the more typical teacher-directed credit recovery model. The online learning model implemented for the study included an online curriculum provided by a vendor and credentialed in-class teachers provided by the

### Key Findings

- Course credits earned over 4 years of high school and on-time graduation rates did not significantly differ based on whether a student took an online or teacher-directed credit recovery course.
- Although the findings suggest that the modality of credit recovery may not affect longer term student outcomes, the results apply to an online model in which students took the course in a summer school classroom with a credentialed in-class teacher.

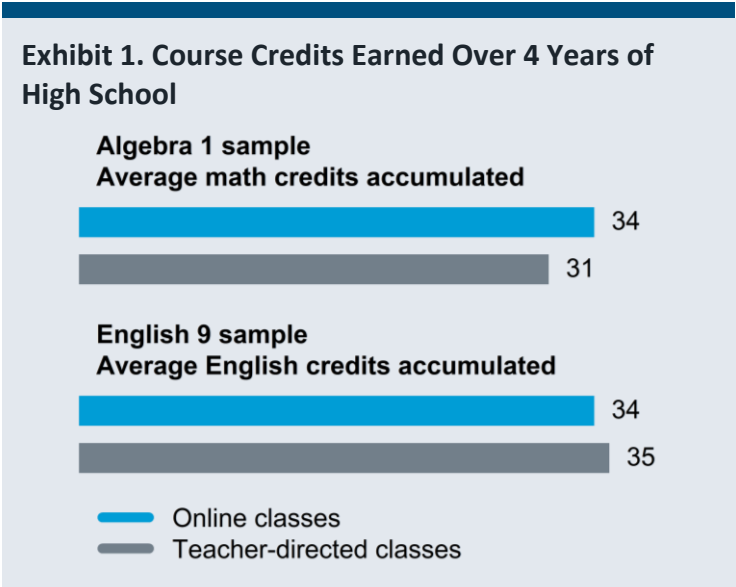
participating schools. The in-class teachers could provide individualized support and supplement the digital instruction.

To estimate the effectiveness of the online learning model, we compared the online classes with teacher-directed classes at each study school. All classes were in the Los Angeles Unified School District and took place in a standard high school classroom during the district’s 5-week summer session in summer 2018 or 2019. The study included 613 students in 28 Algebra 1 classes across 13 high schools and 1,124 students in 70 English 9 classes across 19 Los Angeles high schools.

We used a lottery process to determine whether each student would be enrolled in a teacher-directed class or a class that used the online learning model. This “random assignment” approach allows us to draw valid conclusions about the way differences between the two types of classes affected student progress toward high school graduation. Our analysis used administrative data from the district to determine how many course credits students accumulated over 4 years of high school and whether students graduated from a district high school within 4 years.

## No Meaningful Effect on Credit Accumulation

In the participating school district, students need at least 30 math credits and 40 English credits to meet the district’s graduation requirements. In general, this corresponds to 3 years of math and 4 years of English. In our earlier analysis of whether or not students passed their credit recovery class, we found that students were less likely to pass the online version of the class than the teacher-directed class. This negative effect of online credit recovery on initial credit accumulation did not extend to longer term credit accumulation.



Looking across 4 years of high school, students in both types of credit recovery classes earned a similar number of math and English credits (see Exhibit 1). On average, students in the Algebra 1 credit recovery classes earned a little more than 30 math credits by the end of their fourth year of high school: 34 credits for students who took an online class and 31 credits for students who took a teacher-directed class. Similarly, after their fourth year of high school, students in the English 9 online and teacher-directed credit recovery classes earned, on average, 34 English credits and 35 English credits, respectively.

## No Meaningful Effect on High School Graduation

As with course credit accumulation, we found no meaningful effect on on-time high school graduation for Algebra 1 or English 9 online credit recovery (see Exhibit 2). For Algebra 1, 73% of the students who took an online credit recovery class graduated within 4 years compared with 76% of the students who took a teacher-directed credit recovery class. For English 9, the graduation rates were 59% for the online classes and 61% for the teacher-directed classes.

**Exhibit 2. Percentage of Students Who Graduated From High School Within 4 Years**

### Algebra 1 sample



### English 9 sample



— Online classes  
— Teacher-directed classes

## Conclusion

Proponents of online credit recovery argue that an online course gives students a flexible and personalized learning opportunity to recover credit and get back on track toward graduation. Critics of online credit recovery raise concerns that the online courses provide a less rigorous learning opportunity and can be misused to inflate graduation rates. Our findings do not support either of these two popular narratives about online credit recovery.

Course credits earned over 4 years of high school and on-time graduation rates did not significantly differ based on whether a student took an online or a teacher-directed credit recovery course for Algebra 1 or English 9. This finding mirrors results from a similar study of Algebra 1 online credit recovery in Chicago.<sup>2</sup> Although the findings suggest that the modality of credit recovery may not affect longer term student outcomes, the results apply to the specific online model tested for this study. In particular, we tested an online model in which students took the course in a summer-school classroom with a credentialed in-class teacher. It is not clear whether the findings apply to other online models such as using a fully remote online program or students working independently in a computer lab with a paraprofessional.

The study findings do suggest, however, that schools should consider addressing factors that might facilitate sustained student progress regardless of the course modality or online model. For example, Brief 7 of this research series highlights the importance of fostering a positive student-teacher relationship, and other research points to the importance of improved academic supports, mentoring, and life-skills development.<sup>3</sup>

## NOTES

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<sup>2</sup> Rickles, J., Heppen, J. B., Allensworth, E., Sorensen, N., & Walters, K. (2018). Online credit recovery and the path to on-time high school graduation. *Educational Researcher*, 47(8), 481–491. <https://journals-sagepub-com.air.idm.oclc.org/doi/full/10.3102/0013189X18788054>

<sup>3</sup> Robertson, J. S., Smith, R. W., & Rinka, J. (2016). How did successful high schools improve their graduation rates? *Journal of At-Risk Issues*, 19(1), 10–18.



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