

# Online Credit Recovery: Study Overview

## About the study

The American Institutes for Research (AIR) is studying the effectiveness of online credit recovery.<sup>1</sup> The study focuses on first-year high school students who failed Algebra 1 or English 9 (their ninth-grade English course) and retook the course during the summer before their second year of high school (see Figure 1).<sup>2</sup> The study has two goals: (1) to determine if online credit recovery is an effective way to help struggling students and (2) to describe the online instructional experience.

Within each participating school, we used a lottery to determine whether each student was placed in either the school's typical teacher-directed class or a class that used an online learning model (described later in this brief). This "random assignment" approach allows us to attribute differences in student outcomes to the type of class they took.

## About the research brief series

This research brief is one in a series for the *Online Credit Recovery Study*. In this first brief, we provide an overview of the study and describe the online learning model the study examined. Subsequent briefs in the series highlight key findings from the study. Details about the study's design and methods are available in a technical supplement.

**Figure 1. Number of Study Participants for the Summer**



*Note.* The study took place during the 2018 and 2019 summer terms. Only English 9 classes participated during the 2018 summer term, Algebra 1 and English 9 classes participated during the 2019 summer term.

As the study continues over the next three years, we will release additional briefs on findings from future analyses, including the analysis of longer-term academic outcomes and on-time high school graduation.

## Why study online credit recovery?

Districts throughout the country offer online credit recovery classes.<sup>3,4,5</sup> However, there has been widespread concern that online credit recovery classes provide an “easy ticket to graduation.”<sup>6</sup> Of particular concern is that the online classes are not academically rigorous. Contributing to this line of thinking, a recent study concluded that online courses do not result in substantive learning for students and may even be detrimental for their academic achievement.<sup>7</sup>

Complicating matters further are limited research and inconsistent findings about the effectiveness of online credit recovery.<sup>8</sup> A correlational study of credit recovery in Florida found that students in online classes were more likely to earn a C or better than students in face-to-face credit recovery classes.<sup>9</sup> In contrast, a rigorously designed study of online credit recovery in Chicago found that students who took an online algebra credit recovery class learned less and were less likely to earn credit than students who took a face-to-face class.<sup>10</sup>

Building off the Chicago study, we designed the current study to expand the field’s understanding of online credit recovery’s effectiveness in three ways. (1) The current study focuses on two courses—Algebra 1 and English 9—instead of one. (2) We conducted the study in a different school district and with a different online content provider. (3) We adjusted the online learning model in a way that makes in-class teacher support a more explicit component of the online class.

We made the decision to put more emphasis on in-class teacher support because exploratory results from the Chicago study suggested that students in the online class who received instructional support from an in-class teacher had better academic outcomes than online students who did not.<sup>11</sup>

## What type of online class is this study about?

Online classes can differ in multiple ways. Some are fully online and completely self-paced, while others are hybrid or blended models that combine online learning with face-to-face teaching. For some, students take an online class from home or another remote location; for others, students take a class within a school classroom or lab setting.

### Research Briefs in This Series

- **Brief 1** provides an overview of the study.
- **Brief 2** highlights findings about implementation and short-term outcomes for Algebra 1 credit recovery classes.
- **Brief 3** highlights findings about implementation and short-term outcomes for English 9 credit recovery classes.
- **Brief 4** highlights findings about the resources and costs associated with implementing the online and teacher-directed credit recovery classes.

Please visit <https://www.air.org/online-credit-recovery-study> to access all of the research briefs and for more information about the study.

Figure 1 lays out a number of the dimensions on which online classes may vary, highlighting the characteristics of the online classes that were part of this study.

**Figure 1. Dimensions of the Online Learning Model**

<b>Location</b>	School		Home		Other
<b>Teacher Presence</b>	No Teacher	Asynchronous Online Teacher	Synchronous Online Teacher	In-Person Teacher	
<b>Teacher Availability</b>	Never Available		Sometimes Available		Daily
<b>Type of Instruction</b>	Fully Teacher-Directed		Combination Teacher-Directed and Online		Fully Online
<b>Curriculum</b>	All Print	Print with Some Online	Half Print Half Online	Online with Some Print	All Online
<b>Course Pacing</b>	Student Driven Students Determine Pace			Teacher Driven Teachers Determine Pace	

Note. For each dimension, the highlighted aspect represents a key feature of the online learning model for this study.

The online learning model used in this study allowed students the opportunity to move through the material at their own pace, while also providing more instructional support than is typical with online learning. All of the online classes used a curriculum supplied by an online provider, Edgenuity. Each participating school provided a credentialed, in-class teacher whose role was to monitor students as they worked through the online course and to provide supplemental instructional support targeted to students' needs. Although the online curriculum was the core content in these classes, teachers had the flexibility to adapt and supplement instruction as they saw fit. All classes met for 2.5 hours each day in a standard classroom during the district's 5-week summer session.

To examine the effectiveness of the online class, we compared it to the typical teacher-directed credit recovery class students take at each high school in the study. As with the online classes, a credentialed teacher led the teacher-directed classes, which met for 2.5 hours each day during the summer session. Unlike the online classes, teachers had more flexibility to determine the instructional materials, which were typically paper based. Teachers also had more freedom to determine the pace of student progress through the course content.

## Which students participated in the study?

The study took place in the Los Angeles Unified School District. It focused on students who failed their Algebra 1 or English 9 class during their first year of high school and enrolled to retake the course during the summer before their second year of high school.<sup>12</sup> Figure 2 provides an overview of the students' background characteristics. Across both courses, most students were of Hispanic/Latinx origin and came from families classified as low income. For English 9, the students were also disproportionately male.

Reflecting the nature of credit recovery classes, most students in the study entered high school with low English and math achievement. In addition, most students failed multiple classes in their first year of high school.

## What outcomes does the study focus on?

The study is designed to provide rigorous evidence about whether the online classes affected the following aspects of credit recovery instruction and student outcomes:

- the use of instructional features conducive to personalized instruction;
- students' classroom experiences;
- students' content knowledge; and
- students' credit recovery rates.

In the coming years, the study will also examine whether there are differences in students' longer-term performance on a high school standardized math test, credit accumulation, and on-time high school graduation.

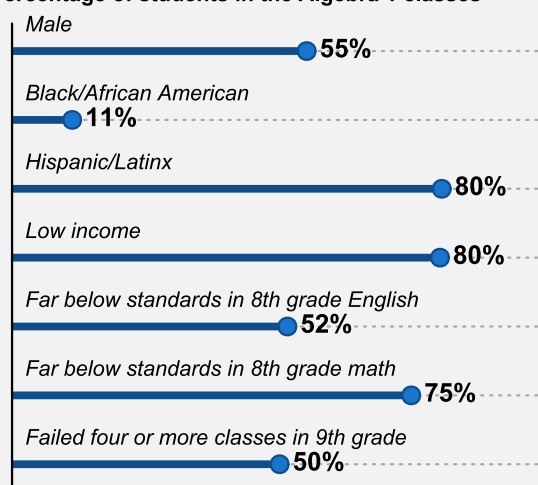
## What data were included in the study?

We used data from multiple sources to study how the credit recovery classes were implemented, how students experienced their class, and how students performed in the class. These included

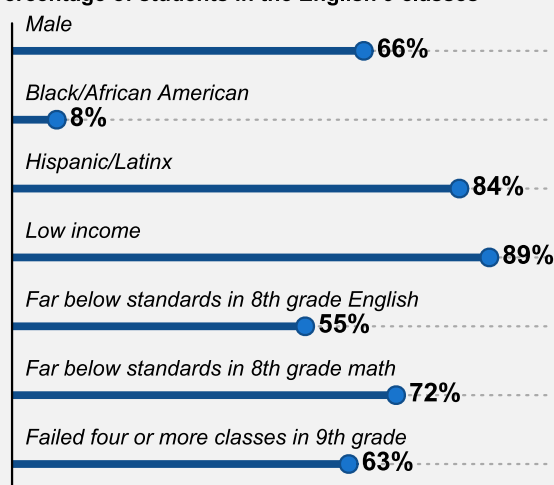
- Weekly **teacher logs** to look at instructional activities
- An end-of-course **teacher survey** to look at instructional features and teacher perceptions of the class
- **Online provider data** to look at how students progressed through the online content

**Figure 2. Background Characteristics of Students in the Study**

### Percentage of students in the Algebra 1 classes



### Percentage of students in the English 9 classes



Notes. Based on 613 students in the Algebra 1 classes and 1,124 students in the English 9 classes (some students were in both classes). Low-income status is based on eligibility for the free or reduced-price lunch program. Far below standards in eighth grade is defined as scoring in the bottom achievement level on the state assessment (labeled "standard not met" in California). For 2018, the percentage of California eighth graders who scored in the bottom achievement level was 26% for English and 40% for math. The number of classes failed in ninth grade is based on the total number of semester-based classes failed during fall and spring semesters.

- An end-of-course **student survey** to look at student experiences in the class
- An **end-of-course test** we developed to gauge student content knowledge
- **Student course grades and characteristics data** from the district to look at final grades in the class and describe the students in the study

## What are we learning?

Although the study is still ongoing, in this section, we highlight some early findings from the analyses conducted to date. Briefs 2 and 3 in this series provide a more detailed description of the findings for Algebra 1 and English 9, respectively.

Overall, the analysis of student course performance suggests common takeaways for Algebra 1 and English 9. For Algebra 1, performance on the algebra test and credit recovery rates were similar in the online and teacher-directed classes. For English 9, student performance on the English test was similar in both types of classes, but the credit recovery rate was significantly lower in the online classes than the teacher-directed classes.

Looking across these results, the study's findings do not support the public perception that online courses are easier to pass or that students learn less in these courses. On the contrary, when compared with a school's typical teacher-directed credit recovery class, the Algebra 1 and English 9 findings suggest that students learn about the same content in both types of classes, and the English 9 findings suggest that students are less likely to pass the online class.

That is not to say that concerns about online credit recovery are unfounded, but to say that the credit recovery landscape is, like most issues in education, diverse. Effects may be different across different online learning models, and even across different subjects using the same model. Also, implementation can matter. Even though the online learning model examined in this study included an explicit role for in-class teacher support, the online classes did not consistently provide more personalized instruction for students. Furthermore, many students in the online classes did not use the online program as much as intended—a finding that reinforces what other studies of online learning report. In addition, in both the online and teacher-directed classes, many students struggled to master the content, which points to broader challenges in developing effective credit recovery courses, regardless of whether they are online or teacher directed.

Moving forward, we will examine some of these complications and challenges, as well as see how students in the online and teacher-directed classes progress through high school. In doing so, we seek to inform how online credit recovery can support academically struggling high school students.

## Notes

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<sup>2</sup> In addition to studying credit recovery over the summer, we conducted a supplemental study of credit recovery during the 2018–19 school year. This brief only reports on findings from the summer credit recovery classes.

<sup>3</sup> Gemin, B., Pape, L., Vashaw, L., & Watson, J. (2015). *Keeping pace with K-12 digital learning: An annual review of policy and practice* (12th edition). Durango, CO: Evergreen Education Group. Retrieved from <http://files.eric.ed.gov/fulltext/ED570125.pdf>

<sup>4</sup> Queen, B., & Lewis, L. (2011). *Distance Education courses for public elementary and secondary students: 2009-10* (NCES 2012-008). Washington, DC: Government Printing Office. Retrieved from <https://files.eric.ed.gov/fulltext/ED526879.pdf>

<sup>5</sup> Watson, J., & Gemin, B. (2008). *Using online learning for at-risk students and credit recovery. Promising practices in online learning series*. Vienna, VA: National American Council for Online Learning. Retrieved from <https://files.eric.ed.gov/fulltext/ED509625.pdf>

<sup>6</sup> Malkus, N. (2019). *Practice outpacing policy? Credit recovery in American school districts* (p. 1). Washington DC: American Enterprise Institute. Retrieved from <http://files.eric.ed.gov/fulltext/ED602423.pdf>

<sup>7</sup> Heinrich, C. J., Darling-Aduana, J., Good, A., Cheng, H. (2019). A look inside online educational settings in high school: Promise and pitfalls for improving educational opportunities and outcomes. *American Educational Research Journal*, 56(6), 2147–2188. <https://doi.org/10.3102%2F0002831219838776>

<sup>8</sup> Viano, S. L. (2018). At-risk high school students recovering course credits online: What we know and need to know. *American Journal of Distance Education*, 36(1), 16–26. <https://doi.org/10.1080/08923647.2018.1412554>

<sup>9</sup> Hughes, J., Zhou, C., & Petscher, Y. (2015). Comparing success rates for general and credit recovery courses online and face to face: Results for Florida high school courses (REL 2015– 095). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. Retrieved from <https://files.eric.ed.gov/fulltext/ED559978.pdf>

<sup>10</sup> Heppen, J. B., Sorensen, N., Allensworth, E., Walters, K., Rickles, J., Taylor, S. S., & Michelman, V. (2017). The struggle to pass algebra: Online vs. face-to-face credit recovery for at-risk urban students. *Journal of Research on Educational Effectiveness*, 10(2), 272–296. Retrieved from <https://files.eric.ed.gov/fulltext/ED604473.pdf>

<sup>11</sup> Taylor, S., Clements, P., Heppen, J., Rickles, J., Sorensen, N., Walters, K., Allensworth, E., & Michelman, V. (2016). *Getting back on Track: The role of in-person instructional support for students taking online credit recovery*. Washington, DC: American Institutes for Research. Retrieved from <https://www.air.org/system/files/downloads/report/In-Person-Support-Credit-Recovery.pdf>

<sup>12</sup> Students classified with an English language development (ELD) level of 1, 2, or 3 (out of 5) were excluded from the study. Per district policy, students with an ELD level below 4 should not be enrolled in online courses. Students with an ELD level of 4 or 5 were allowed to participate in the study.



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