



EXECUTIVE SUMMARY



Online courses for credit recovery in high schools: Effectiveness and promising practices

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Online courses for credit recovery in high schools: Effectiveness and promising practices

IN BRIEF

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Two important trends in American high school education are converging, opening new opportunities for underserved students to access a high school diploma. Over the past decade, credit acceleration and recovery programs have become increasingly popular as schools seek ways to help struggling students catch up and graduate. At the same time, online learning has quickly gained traction as an alternate means of instructional delivery for high school students. Online credit recovery represents the convergence of these two innovations, offering flexible learning options for students with varied learning needs and transparent systems for assessing their progress.

Online credit recovery shows potential as a competency-based approach to accelerating the progress of students who have fallen behind or who struggle in traditional learning environments. It is a relatively new area, however, and thus ripe for research on promising practices and effectiveness.

This study looks at 24 Massachusetts high schools that developed credit recovery programs to curb higher-than-average dropout rates. It explores the following questions:

1. What course structures and classroom strategies do students and staff find most supportive of student success?
2. How effective is online credit recovery at reducing dropout rates and increasing participants' academic achievement, graduation rates, and college enrollment?
3. How well do students perform in the courses themselves? Are there noticeable patterns in how quickly and successfully students complete courses?

HOW ONLINE CREDIT RECOVERY WORKS

There is great variety in how online credit recovery programs are currently implemented. Across the 24 sites in this study, researchers saw:

- courses delivered in school and community settings.
- full-year, semester-long, and partial credit recovery options.

- students engaged in online coursework during school hours, after school, in the evening, on weekends, and during school vacations.

At most sites, students took one or two online courses at a time, but a few programs allowed over-aged, under-credited students to take up to five online courses at a time. Researchers saw very little teacher-led instruction, with most learning happening online via content provided by vendors such as Apex, Compass, Edgenuity, and Edmentum. Course instructors typically supervised up to 20 students in a classroom, comprising multiple grade levels and academic disciplines. Some students worked on their courses outside of class time and remotely but were required to take assessments on site.

STUDY DESIGN

Sample

The study examines 24 schools in 11 districts, all participants in a five-year, federally funded dropout reduction initiative. Online credit recovery was one of many strategies implemented by MassGrad programs.

The course participants across study sites were largely from underserved groups:

- 81 percent received free or reduced price lunch.
- 48 percent were Latino and 20 percent were Black.
- 20 percent received special education services.
- 13 percent were English language learners.
- 48 percent were deemed at high risk of not graduating by the state's Early Warning Indicator System, and 21 percent were deemed at moderate risk.

Methods

The study design includes three components.

Implementation strategies: A combination of student focus groups, staff interviews, and classroom observations helped researchers identify school structures, classroom practices, and other conditions that seemed most effective in implementing online credit recovery.

Effectiveness of the intervention: A rigorous, quasi-experimental statistical analysis compared the graduation, dropout, college enrollment rates, and state assessment scores of online credit recovery students (2,193 total) with students who did not participate in online credit recovery (22,099 total). Propensity score weighting procedures were used to minimize differences between the two groups. Effects were assessed during students' final year of participation and one and two years later, where data were available.

Course participation and success: Course data from three online vendors were matched with the Massachusetts Department of Elementary and Secondary Education databases to examine patterns of course taking and completion. The analysis included 2,223 students and a total of 6,742 online credit recovery courses taken.

FINDINGS

Promising Practices

Classroom-based supports

Researchers noted a variety of academic and socio-emotional supports provided by the staff—most often teachers, but sometimes counselors and paraprofessionals—who supervise online classrooms.

On-the-spot academic support: Many instructors circulate in the classroom, checking in on individuals' progress and providing targeted support. Teachers and administrators sometimes enlist support from outside tutors and teachers with subject area expertise as well.

Built-in formative assessments: Frequent online assessments enable teachers to target their support and enable students to guide their own learning. A variety of progress indicators built into the courseware help teachers and students set daily goals and monitor progress.

Differentiated support for subgroups: Students with disabilities and English language learners often receive additional support and accommodations from teacher specialists. They also take advantage of courseware features aligned with their learning needs, such as calculators, translation tools, and note-taking applications.

Supplementary notebooks: Many programs require students to keep structured notebooks where they record key content along with reflections. Notebooks are often used as a preliminary check for understanding as well as a tool for building literacy and study skills necessary for success in online courses.

Learning environment: Teachers have found different methods for minimizing distractions and fostering productivity, such as use of headphones and Internet-filtering software. One strategy that appears to be particularly effective is to arrange computers around the classroom periphery, enabling teachers to easily monitor students' screens.

Attendance supports: Online course recovery students benefit from typical attendance interventions, including calls home, frequent check-ins, and home visits. For students with significant external responsibilities, some schools have flexible scheduling options as well. Providing food and transportation can boost attendance significantly, particularly for summer and after-school courses.

School Structures and Policies

Decisions made at the school level also affect students' and teachers' experiences with online credit recovery. Several types of policies and structures stood out as key factors across sites.

SELECTING COURSEWARE: Several sites changed courseware during the course of the study. As they reviewed options, staff cited several considerations as important.

- **Academic rigor:** Some courseware relies heavily on simple, fact-based questions with answers that can be quickly found online, while other programs require higher-level processing and extended responses.
- **Content creation and customization:** Several schools found that the time required to create their own online courses using learning platforms such as Moodle was not sustainable. They preferred to purchase courseware with extensive content and then customize the content to local standards.

Sites often opted for the “fast track” course customization, which allows individual students to focus just on the standards they have left to master after taking a pre-assessment.

- **Varied media:** Text-heavy platforms are not ideal for all students, particularly those with reading challenges. Platforms that integrate audio and video lectures, more varied tasks and assessments, and frequent checks for understanding are generally seen as more motivating and effective.
- **Technical concerns:** Sites may prioritize one courseware vendor over another based on compatibility issues with existing computers, price, and the availability of technical support.

SELECTING STUDENTS: Given limited staff and computer resources, schools want to serve students who they believe are most likely to succeed in an online course environment. Sites in this study select students based on three types of factors.

- **Grade level:** While some schools strongly favor 12th graders who only needed one or two course credits to graduate, others see online credit recovery as more useful for getting students back on track earlier in their high school career.
- **Skill level:** Two schools exclude students with very low reading levels, while others give preference to students who had been previously successful in recovering credits. Most schools keep credit recovery options open to a full spectrum of skill and prior achievement levels.
- **Commitment:** One school requires students with serious behavior or attendance issues to sign contracts, with their continued participation contingent on meeting the terms of the contract.

SETTING GRADING POLICIES: Assigning grades to online credit recovery courses can be handled in many ways, and study schools took a variety of approaches.

- **Minimum passing threshold:** To pass an online course, most schools require students to attain the same threshold grade required for more traditional courses—typically 60, 65, or 70 percent.
- **Weighting assignments:** A few schools rely on the grade calculated by the courseware, which weights and averages assessment scores. However, most schools also factor in participation grades, notebooks, or offline assignments that count for 20 to 30 percent of the total grade.
- **Transcript and GPA:** Schools may choose to keep the original failing grade on the transcript as is, average the original and new grade, or increase the final grade to the lowest passing threshold. In one school that takes a fully competency-based approach, the final course grade is based exclusively on the final level of mastery that the student demonstrates, with no penalty applied for previous attempts.

ENCOURAGING STUDENTS TO WORK OFF SITE: Most programs encourage students to work on their online courses outside of program hours, which they can do anywhere with an Internet connection. Teachers reported that about a quarter of their students worked at home at some point. Several factors influence the extent and success of off-site work.

- **At home vs. at school:** Teachers agree that students who work off site finish their courses more quickly, but students who work entirely at home may be less likely to succeed in earning credit.
- **Progress and deadlines:** Students tend to work off site more when they are nearing completion of a course, at the end of the semester, or when graduation deadlines are approaching.
- **Problem solving:** Barriers to off-site work include needing support from a teacher, lack of a computer or an Internet connection, or courseware not working on home devices. Teachers

may work around these barriers by printing out materials for at-home work and scheduling regular check-ins for support.

- **Assessments:** A substantial obstacle to off-site work is the common requirement that students complete assessments at school. That may limit off-site work to an hour or less for courseware with frequent assessments. One site addressed this problem by allowing off-site completion of lesson assessments, which were not counted in the course grade, while requiring cumulative unit or course assessments to be administered at school.

Effectiveness of Online Credit Recovery

The quasi-experimental portion of the study showed two very positive outcomes that suggest online credit recovery's usefulness as a dropout intervention:

- Participants in online courses were 1.8 times as likely as non-participants to have graduated two years after their final year of participation.
- Participants in online courses were about half as likely as non-participants to drop out of high school during their final year of participation.

Other findings were neutral or did not favor participation in online credit recovery courses:

- Online credit recovery participants scored lower than non-participants on the state's science and mathematics exams; there was no difference in English language arts.
- Participants were less likely than non-participants to enroll in college the year after graduating.
- Participants who were followed for multiple years were no less likely than non-participants to drop out one or two years after their final year of program participation.
- Course passing rates were higher for traditional credit recovery than online credit recovery.
- Course passing rates were higher for summer online courses than for online courses offered during the school year.

The explanation for some these findings may be, in part, related to the design of the study. Researchers could only assess two-year impacts for the earliest cohort of students; it's possible that, as these relatively new online credit recovery programs mature, they will show better long-term outcomes.

Course Participation and Performance Patterns

Analyses of course data for almost 7,000 individual courses revealed several interesting patterns:

- **Time to completion:** Half of online courses were completed in 20 hours or less; the average completion time was 28 hours. About four percent of students spent more than 100 hours to complete a course.
- **Special populations:** Students with disabilities took longer than other students to complete science and elective courses, while English language learners took longer than other students to complete mathematics and English language arts courses.
- **Prior mastery:** Students with higher pre-test scores were able to complete their online credit recovery courses in significantly less time than those with lower pre-test scores, but pre-test scores accounted for only 41 percent of the variability in course completion times.

RECOMMENDATIONS

This study provides rich data on a relatively new innovation in high school education. The findings point to many strategies that school leaders, policymakers, and researchers can use to strengthen programs and deepen our understanding of effective practice in online credit recovery.

Schools Leaders and Policymakers

- ✓ Encourage specialization and consider credentialing of online credit recovery teachers.
- ✓ Improve course quality through staff training and mentoring.
- ✓ Provide teachers with a laptop or tablet computer to maximize mobility.
- ✓ Provide extra supports to English language learners and students with disabilities and low literacy levels.
- ✓ Consider providing credit based on pre-test scores.
- ✓ Improve structures to support working anytime, anywhere.
- ✓ Develop flexible attendance policies for over-aged, under-credited students.
- ✓ Develop learning communities of credit recovery teachers and administrators within and among schools.

Researchers

- ✓ Further examine the relative effectiveness of school-year and summer courses.
- ✓ Further examine the relative effectiveness of online and traditional credit recovery courses.
- ✓ Investigate the factors associated with effectiveness of full versus partial course recovery.
- ✓ Investigate the role and impact of offline components blended with online courses.
- ✓ Further examine the relative effectiveness of online credit recovery for different academic subjects.
- ✓ Provide guidance about the relative merits of different courseware options.
- ✓ Collaborate with schools and courseware vendors to maximize data quality.

CONCLUSION

Creating an effective online credit recovery program is complex, but evidence from the most successful programs shows that this approach can be a powerful intervention to improve outcomes for struggling students. Over time, as infrastructure, expertise, and research evolve, online courses may become a key strategy for boosting high school graduation rates and preparing more young people for college and careers.



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