Flipped Learning Model Dramatically Improves Course Pass Rate for At-Risk Students

Clintondale High School, Clintondale Community Schools, Clinton Township, Michigan

Foundations of Flipped Learning™

Demographics

- Urban school in greater Detroit area
- Grades 9–12
- 31 teachers
- 553 students
- 74% free and reduced lunch
- 73% African American
- 26% white
- 18% special education

Challenge

In 2009–2010, the pass rate for students at Clintondale High School (CHS) in Clinton Township, Michigan, was low across all subject areas. Among freshmen, only 48 percent of students passed English language arts, 56 percent passed math, 59 percent passed science, and 72 percent passed social studies.

CHS teachers, led by Principal Greg Green, decided that the situation was no longer tenable. "We looked at our low pass rate and decided it was unconscionable," said Mr. Green. "We had to find a new way to educate our at-risk students. We were asking them to process information in an environment that was often not conducive to learning."

Teachers recognized that students lacked a safe and effective learning environment at school and at home, as well as supportive relationships, collaboration opportunities, and consistent access to instructional technology. "We realized that the flipped learning model, unlike the traditional lecture model, could provide what our students needed," said Mr. Green.

Implementation

In September 2010, CHS tested the flipped learning model in one freshman at-risk social studies class, and every student passed the class. In a freshman social studies class made up of students performing on grade level in which a traditional lecture model was used, the pass rate was unchanged.

That fall, CHS made the decision to implement the flipped learning model in all its freshman classes, and then it expanded the implementation to every grade in the 2011–12 school year. Teachers now videotape their classroom lectures and have students watch the videos for homework, along with using other resources. In the classroom, teachers work with students on individual assignments and facilitate collaborative learning in small groups.

Math teachers, for example, create videos outlining the steps in a set of sample problems, post the videos online, and ask students to watch them at home. In class the next day, students work together in groups to solve similar problems, supported by their teacher and their classmates, with individual help provided as needed.

Approximately 82 percent of students use their own devices to watch the videos at home. For other students, CHS makes computers available before and after school in the media center. Teachers use screen-capture software as well as graphics tablets and pen displays to demonstrate concepts and simulate the classroom experience in their videos.

The amount of one-on-one time teachers spend with students has increased by a factor of four, allowing them to get to know students better, personalize learning and assessment, and improve students' skills and understanding.

According to Mr. Green, teachers' lives have changed dramatically. "Teachers feel good at night knowing they have done something very positive for students. The flipped approach frees up classroom time so teachers can help students master topics, deepen relationships, and build critical thinking skills," he said.

> "The flipped approach frees up classroom time so teachers can help students master topics, deepen relationships, and build critical thinking skills."
>
> —Greg Green, Principal, Clintondale High School

Under the Michigan School of Choice program, students from across the metropolitan Detroit area are attending CHS. "We believe students are choosing us because our flipped environment offers a new level of support," said Mr. Green.

Results

Test scores, graduation rates, and college attendance have increased at CHS, student engagement has improved dramatically, and discipline problems have declined in both number and severity. In the freshman class in the first flipped learning semester, the pass rate increased to 67 percent in English language arts, 69 percent in math, 78 percent in science, and 81 percent in social studies, representing an increase of 9 to 19 percentage points across the subjects. Discipline referrals declined by 66 percent.

In 2012, although the graduating class had participated in the flipped learning model for only about six months, the graduation rate increased from 80 to 90 percent, college attendance jumped from 73 to 80 percent, and college readiness improved substantially.

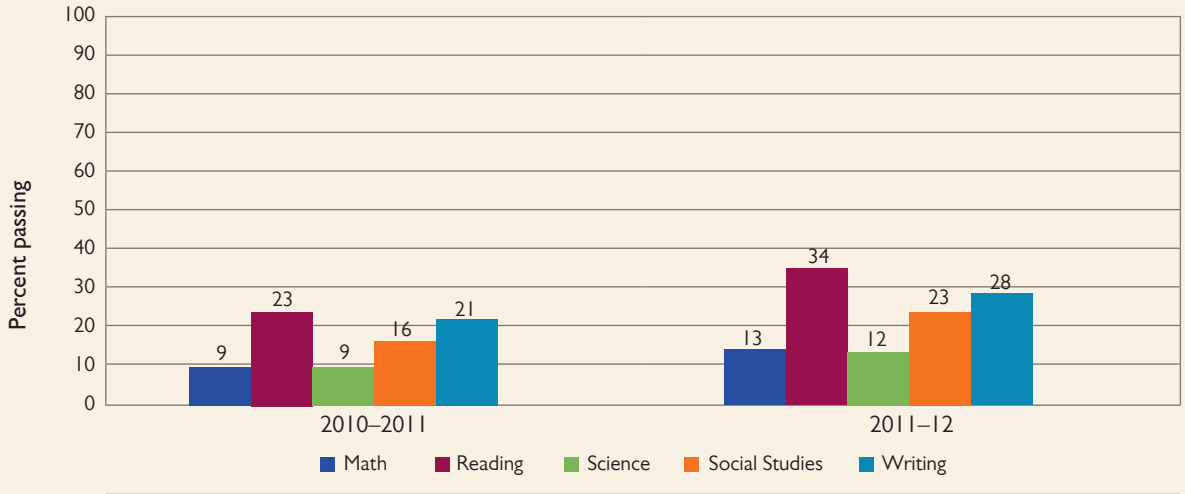
On the Michigan Merit Exam in 2012, the pass rate for students in the eleventh grade increased in every subject area over the prior year. The most notable gain was in reading, where the percentage of students passing increased by 11 percentage points.

Flipped learning has brought several additional benefits. "We can now share classroom materials more easily, serve students when they are absent, and ensure a consistent curriculum, as well as accurate classroom content for substitute teachers," said Mr. Green. The benefits also extend beyond the student body, because parents often watch the online videos with their children at home. "Not only are we educating our students, but we are also educating the entire community," he said.

> "Not only are we educating our students, but we are also educating the entire community."
>
> —Greg Green, Principal, Clintondale High School

Mr. Green is a cadre member of the Flipped Learning Network and participated in the development of the Foundations of Flipped Learning™ blended course, which assists educators in implementing flipped learning. "I believe flipped learning has the potential to help struggling students across the country improve their academic performance," he said.

Passing Rate Increases in All Subject Areas on State Test



Percentage of students in grade 11 who passed the Michigan Merit Exam