

## MyBradyLab

School Name EMS Training Institute, Inc., Simi Valley, CA  
Course Name Emergency Medical Technician  
Course Format Lecture

**Key Results** Students who achieved higher quiz and exam scores also earned higher MyBradyLab scores. In addition, data show a very strong positive correlation between MyBradyLab homework scores and average quiz and exam scores.

### Submitted by

Mark Komins, President and Program Director

### Course materials

MyBradyLab and *Brady Emergency Care*, Limmer, O'Keefe, Grant, Murray, Bergeron, Dickinson

### Setting

Located 30 miles from downtown Los Angeles, EMS Training Institute specializes in emergency medical technician (EMT) training in California, as well as online EMT refresher courses, cardiopulmonary resuscitation (CPR) training, and first aid courses for the public. They also offer full-service advanced cardiac life support (ACLS), pediatric advanced life support (PALS), and emergency medical services (EMS) training for advanced students, such as EMTs, paramedics, and nurses. In 2014, its EMT training program boasted 100-percent course-completion and certification pass rates. The average student age is 18–24, 90 percent are male, and 50 percent identify as minorities (including African American, Asian, and Hispanic).

The Emergency Medical Technician course provides a basis for gaining EMT certification, and it is taken by students in the EMT program, fire fighters, life guards, and paramedics. In accordance with the US Department of Transportation Basic Life Support Curriculum and US Educational Guidelines, students are given the opportunity to develop the necessary knowledge, skills, and abilities required to pass the National Registry Emergency Medical Technician certification exam. The EMT course is generally conducted at the basic life-support level. Upon completion of the exam, EMTs are eligible for employment and for paramedic-level training. Students must have a valid CPR card prior to registering for the course.

### Challenges and Goals

EMT students come from a variety of backgrounds and learn in many different ways. With that in mind, Mark Komins, president and program director, sought a digital addition to the course that would (1) enable students to study outside of the classroom, (2) support both individual styles and the needs of the class as a whole, and (3) reinforce lecture material and give students the opportunity to immediately assess what they learned during lecture. He implemented MyBradyLab in 2013 and continues to use the program today.

### Implementation

Komins encourages students to read the appropriate chapter material before attending lecture, so they are familiar with vocabulary and content. After lecture, he assigns work in MyBradyLab to reinforce lecture content.

Komins covers three or four chapters each week, and students are expected to spend considerable time working on their MyBradyLab assignments. In a 2015 end-of-semester survey, 43 percent of students reported that they spent four or more hours per week working in MyBradyLab; an additional 43 percent reported that they spent two to four hours per week in the program. Students are allowed one attempt to complete each weekly assessment, as follows:

- **Chapter pretest.** Not scored for a grade, but generates personalized homework based on its results.
- **Homework assignment.** Number and content of questions depends on pretest performance.
- **Chapter test.** Uses preassigned default questions to facilitate review of chapter content before a high-stakes posttest.
- **Chapter posttest.** Final assessment of chapter material using preassigned default questions.

*Students who earned higher MyBradyLab scores subsequently earned higher quiz and exam scores.*

Assessments outside of MyBradyLab include:

- **In-class weekly quiz.** A 10-question, paper-and-pencil quiz comprising test-bank questions.
- **Four block exams.** 100 multiple choice questions worth 2 points/question built using test bank questions; in class paper and pencil exam.
- **Final exam.** A paper-and-pencil exam comprising 200 multiple-choice test-bank questions, each worth 3 points.
- **Additional quizzes.** A medical terminology quiz comprising 75 fill-in-the-blank questions and the Glasgow Coma Scale quiz comprising 35 fill-in-the-blank questions.

In accordance with National Registry Emergency Medical Technician exam standards, quizzes and exams have time limits; students are allowed 1 minute per question.

Due dates are firm. If a task or assignment is not turned in by the specified date, the student receives a zero. This also applies to incomplete assignments. Komins urges instructors to follow this best practice when requiring the MyBradyLab. “Instructors must assign firm due dates and stick to them,” he says. “There should be no exceptions, especially technology excuses.” Students are given an assignment schedule at the beginning of the semester. They know when all assignments are due and should plan accordingly.

Students are required to successfully complete at least two clinical-experience days, including one ambulance ride-along and one day in a hospital emergency room.

Students must earn at least an 80 percent in the course in order to take the National Registry EMT exam.

#### Assessments

71 percent	MyBradyLab homework, chapter tests, and posttests
12 percent	Block exams (nine)
9 percent	Final exam
6 percent	Chapter quizzes (41)
2 percent	Other quizzes

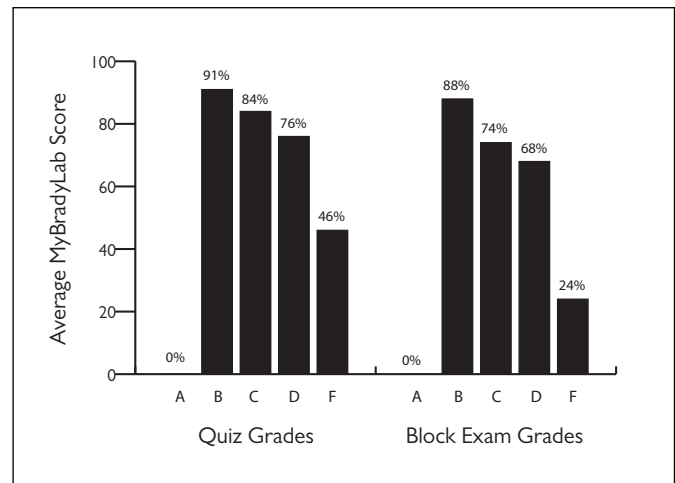


Figure 1. Relationship between Average Block Exam and Quiz Grades and Average MyBradyLab Scores, Spring 2015 (n = 18)

#### Results and Data

Figure 1 shows the relationship between average MyBradyLab scores and performance on quizzes and exams. Students who earned higher MyBradyLab scores subsequently earned higher quiz and exam scores. Similarly, performance on quizzes and exams (on average) declined as MyBradyLab homework scores declined for this course implementation. No students earned an A average on quizzes or exams.

- Students who demonstrated course mastery by earning an average grade of A, B, or C on their block exams had an average MyBradyLab score of 83 percent. Students who earned an average grade of D or F on their block exams had an average MyBradyLab score of 50 percent.

Figures 2 and 3 are correlation graphs that measure the strength of the relationship between average MyBradyLab homework scores and average quiz and exam scores. The corresponding  $p$  value measures the statistical significance, or strength, of the evidence, with  $< .01$  considered strong evidence. A very strong positive correlation exists between average MyBradyLab homework scores and average quiz scores, where  $r = .76$  and  $p < .01$ . Similarly, a very strong positive correlation exists between average MyBradyLab scores and average block exam scores where  $r = .86$  and  $p < .01$ . For students, MyBradyLab

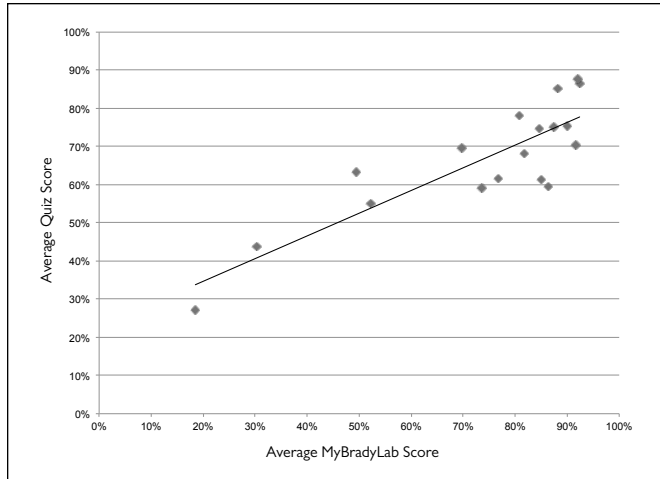


Figure 2. Correlation of Average MyBradyLab Scores to Average Quiz Scores, Spring 2015 ( $n = 18$ )

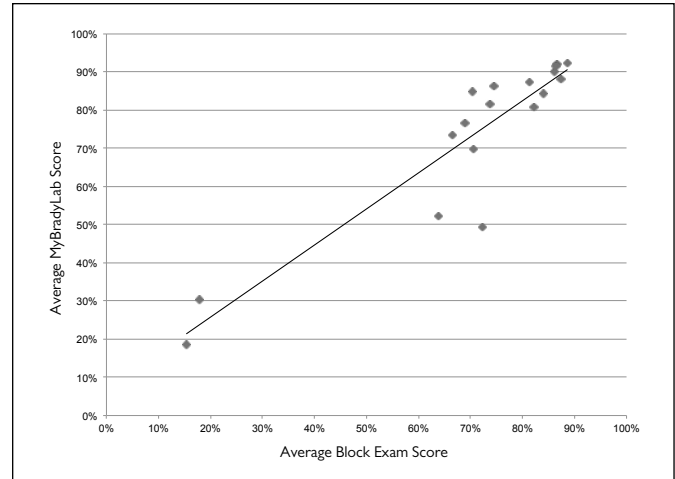


Figure 3. Correlation of Average MyBradyLab Scores to Average Block Exam Scores, Spring 2015 ( $n = 18$ )

scores may help them identify where they stand in terms of successfully completing their exams. It appears that performance on MyBradyLab assignments could be a leading indicator of exam and course success. (A more rigorous study might develop and test this concept further.) As a best practice, MyBradyLab scores may help instructors identify early on students who are struggling and might be at risk of poor course performance.

### The Student Experience

In spring 2015, Komins conducted a voluntary end-of-semester student survey regarding the use of MyBradyLab and its impact on learning and assessment. Of the students surveyed:

- 100%** Agree or strongly agree that their understanding of the course material increased as a result of using MyBradyLab.
- 100%** Agree or strongly agree that the use of MyBradyLab positively impacted their quiz and exam scores.
- 72%** Agree or strongly agree that they would recommend MyBradyLab for future use by their instructor.

In the same survey, when asked what they liked best about MyBradyLab, student answers included the following:

*“It helped reinforce material and helped prepare for quizzes and tests.”*

*“I didn’t like it but it helped me learn!”*

### Conclusion

The stakes are high for students in Komins’ EMT course—they must learn three to four chapters a week and earn at least 80 percent in the course in order to sit for the National Registry EMT exam. It is critical that students do not fall behind. Komins uses MyBradyLab to keep students on task, on time, and prepared for course assessments. In addition, MyBradyLab’s wide variety of learning tools and assessment types helps learners of all types and skills to find the tools that work best for them, thereby facilitating their paths to course success.

This user-report case study documents implementation practices and evaluates possible relationships between program implementation and student performance. These findings are not meant to imply causality or generalizability beyond this specific instance. Rather, findings from this study demonstrate associations potentially useful for further theory testing in future experimental studies. For this case study, a mixed-methods design was applied, and the data collected included qualitative data from interviews, quantitative program usage analytics, and student performance data. An open-ended interview protocol was used to guide data collection.